



APPENDIX I: LETTERS FROM USDA FOREST SERVICE AND GOVERNOR



HALEY BARBOUR
GOVERNOR

STATE OF MISSISSIPPI OFFICE OF THE GOVERNOR

March 7, 2005

Mr. Dale Bosworth
Chief, USDA Forest Service
201 14th St, SW at
14th and Independence Ave, SW
Washington, DC 20250

Dear Chief Bosworth,

As Governor of the State of Mississippi, I am pleased to inform you that Mississippi desires to participate in the Forest Legacy Program. With this letter, I would like to formally delegate the Mississippi Forestry Commission as Mississippi's lead agency in coordinating the program. The Commission is headed by interim State Forester Everard Baker who will serve as the principal contact for the USDA Forest Service in establishing the Forest Legacy Program in Mississippi.

Forestry is very important to Mississippi, and I look forward to implementing this valuable program in our State.

Sincerely,

Haley Barbour
Governor

HB/jwr

CC: Ms. Elizabeth S. Crane, USFS
Mr. Everard Baker, MS Forestry Commission
Dr. Sam Polles, MS Dept. Wildlife, Fisheries, and Parks





United States
Department of
Agriculture

Forest
Service

Washington
Office

1400 Independence Avenue, SW
Washington, DC 20250

File Code: 3200

Date: March 30, 2005

The Honorable Haley Barbour
Governor
State of Mississippi
P.O. Box 139
Jackson, MS 39205

Dear Governor Barbour:

I am writing to you on behalf of USDA Forest Service Chief, Dale Bosworth. Thank you for your letter of March 7, 2005, indicating interest in the Forest Legacy Program and naming the Mississippi Forestry Commission as the lead agency to implement the program. We look forward to working with the Mississippi Forestry Commission over the coming months to develop an Assessment of Need (AON). The AON provides an evaluation of forests and forest uses, an assessment of forces that are converting forests to non-forest uses, and guides implementation of the program in the State. Subject to availability of funds in fiscal year 2005, the USDA Forest Service hopes to provide funding to assist with the development of the AON. We are also ready to provide technical assistance as needed.

We appreciate the opportunity to collaborate with you on the Forest Legacy Program. The Program Coordinator for the Southern Region, which includes Mississippi, is Elizabeth Crane, who can be contacted at (404) 347-5214. Thank you for your interest in and support of the Forest Legacy Program.

Sincerely,


LARRY PAYNE
Director, Cooperative Forestry





APPENDIX II: FOREST LEGACY STATUTE

Excerpt from Title XII – State and Private Forestry
Forest Stewardship Act of 1990
Section 1217 – Forest Legacy Program

SEC. 1217 FOREST LEGACY PROGRAM.

The Act (16 U.S.C. 2101 et seq.) is amended by inserting after section 6 (as added by section 1216 of this Act) the following new section:

SEC. 7. FOREST LEGACY PROGRAM.

- (a) **ESTABLISHMENT AND PURPOSE-** The Secretary shall establish a program, to be known as the Forest Legacy Program, in cooperation with appropriate State, regional, and other units of government for the purposes of ascertaining and protecting environmentally important forest areas that are threatened by conversion to nonforest uses and, through the use of conservation easements and other mechanisms, for promoting forest land protection and other conservation opportunities. Such purposes shall also include the protection of important scenic, cultural, fish, wildlife, and recreational resources, riparian areas, and other ecological values.

- (b) **STATE AND REGIONAL FOREST LEGACY PROGRAMS-** The Secretary shall exercise the authority under subsection (a) in conjunction with State or regional programs that the Secretary deems consistent with this section.
- (c) **INTERESTS IN LAND-** In addition to the authorities granted under section 6 of the Act of March 1, 1911 (16 U.S.C. 515), and section 11(a) of the Department of Agriculture Organic Act of 1956 (7 U.S.C. 428a(a)), the Secretary may acquire from willing landowners lands and interests therein, including conservation easements and rights of public access, for Forest Legacy Program purposes. The Secretary shall not acquire conservation easements with title held in common ownership with any other entity.
- (d) **IMPLEMENTATION-**
- (1) **IN GENERAL-** Lands and interests therein acquired under subsection (c) may be held in perpetuity for program and easement administration purposes as the Secretary may provide. In administering lands and interests therein under the program, the Secretary shall identify the environmental values to be protected by entry of the lands into the program, management activities which are planned and the manner in which they may affect the values identified, and obtain from the landowner other information determined appropriate for administration and management purposes.
- (2) **INITIAL PROGRAMS-** Not later than 1 year after the date of enactment of this section, the Secretary shall establish a regional program in furtherance of the Northern Forest Lands Study in the States of New York, New Hampshire, Vermont, and Maine under Public Law 100-446. The Secretary shall establish additional programs in each of the Northeast, Midwest, South, and Western regions of the United States, and the Pacific Northwest (including the State of Washington), on the preparation of an assessment of the need for such programs.
- (c) **ELIGIBILITY-** Within 1 year from the date of enactment of this section and in consultation with State Forest Stewardship Advisory Committees established under section 15(b) and similar regional organizations, the Secretary shall



establish eligibility criteria for the designation of forest areas from which lands may be entered into the Forest Legacy Program and subsequently select such appropriate areas. To be eligible, such areas shall have significant environmental values or shall be threatened by present or future conversion to nonforest uses. Of land proposed to be included in the Forest Legacy Program, the Secretary shall give priority to lands which can be effectively protected and managed, and which have important scenic or recreational values; riparian areas; fish and wildlife values, including threatened and endangered species; or other ecological values.

- (f) **APPLICATION-** For areas included in the Forest Legacy Program, an owner of lands or interests in lands who wishes to participate may prepare and submit an application at such time in such form and containing such information as the Secretary may prescribe. The Secretary shall give reasonable advance notice for the submission of all applications to the State forester, equivalent State official, or other appropriate State or regional natural resource management agency. If applications exceed the ability of the Secretary to fund them, priority shall be given to those forest areas having the greatest need for protection pursuant to the criteria described in subsection (d).
- (g) **STATE CONSENT-** Where a State has not approved the acquisition of land under section 6 of the Act of March 1, 1911 (16 U.S.C. 515), the Secretary shall not acquire lands or interests therein under authority granted by this section outside an area of that State designated as a part of a program established under subsection (b).
- (h) **FOREST MANAGEMENT ACTIVITIES-**
 - (1) **IN GENERAL-** Conservation easements or deed reservations acquired or reserved pursuant to this section may allow forest management activities, including timber management, on areas entered in the Forest Legacy Program insofar as the Secretary deems such activities consistent with the purposes of this section.
 - (2) **ASSIGNMENT OF RESPONSIBILITIES-** For Forest Legacy Program areas, the Secretary may delegate or assign management and enforcement responsibilities over federally owned lands and interests in lands only to another governmental entity.
- (i) **DUTIES OF OWNERS-** Under the terms of a conservation easement or other property interest acquired under subsection (b), the landowner shall be required to manage property in a manner that is consistent with the purposes

for which the land was entered in the Forest Legacy Program and shall not convert such property to other uses. Hunting, fishing, hiking, and similar recreational uses shall not be considered inconsistent with the purposes of this program.

(j) **COMPENSATION AND COST SHARING-**

- (1) **COMPENSATION-** The Secretary shall pay the fair market value of any property interest acquired under this section. Payments under this section shall be in accordance with Federal appraisal and acquisition standards and procedures.
- (2) **COST SHARING-** In accordance with terms and conditions that the Secretary shall prescribe, costs for the acquisition of lands or interests therein or project costs shall be shared among participating entities including regional organizations, State and other governmental units, landowners, corporations, or private organizations. Such costs may include, but are not limited to, those associated with planning, administration, property acquisition, and property management. To the extent practicable, the Federal share of total program costs shall not exceed 75 percent, including any in-kind contribution.

(k) **EASEMENTS-**

- (1) **RESERVED INTEREST DEEDS-** As used in this section, the term 'conservation easement' includes an easement utilizing a reserved interest deed where the grantee acquires all rights, title, and interests in a property, except those rights, title, and interests that may run with the land that are expressly reserved by a grantor.
- (2) **PROHIBITIONS ON LIMITATIONS-** Notwithstanding any provision of State law, no conservation easement held by the United States or its successors or assigns under this section shall be limited in duration or scope or be defensible by--
 - (A) the conservation easement being in gross or appurtenant;
 - (B) the management of the conservation easement having been delegated or assigned to a non-Federal entity;
 - (C) any requirement under State law for re-recording or renewal of the easement; or
 - (D) any future disestablishment of a Forest Legacy Program area or other Federal project for which the conservation easement was originally acquired.



- (3) **CONSTRUCTION**- Notwithstanding any provision of State law, conservation easements shall be construed to effect the Federal purposes for which they were acquired and, in interpreting their terms, there shall be no presumption favoring the conservation easement holder or fee owner.
- (l) **APPROPRIATION** - There are authorized to be appropriated such sums as may be necessary to carry out this section.

**Federal Agriculture Improvement and Reform Act of 1996 Title III –
Conservation Subtitle G – Forestry**

Sec. 374 Optional State Grants for Forest Legacy Program

Section 7 of the Cooperative Forestry Assistance Act of 1978 (16 U.S.C. 2103c) is amended: (1) by redesignation subsection (l) as subsection (m); and (2) by inserting after subsection (k) the following:

(l) **OPTIONAL STATE GRANTS.-**

- (1) **IN GENERAL.** – The Secretary shall, at the request of a participating State, provide a grant to the State to carry out the Forest Legacy program in the State.
- (2) **ADMINISTRATION.** – If a State elects to receive a grant under this subsection-
 - (A) the Secretary shall use a portion of the funds made available under subsection (m), as determined by the Secretary, to provide a grant to the State; and
 - (B) the State shall use the grant to carry out the Forest Legacy Program in the State, including the acquisition by the State of lands and interests in lands.

The new subsection (m), formerly subsection (l), reads as follows:

- (m) **APPROPRIATIONS.** – There are authorized to be appropriated such sums as may be necessary to carry out this section.



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APPENDIX III: FOREST COMMUNITIES OF MISSISSIPPI

A community is collectively, all of the organisms inhabiting a common environment and interacting with each other. The Mississippi Natural Heritage Program (NHP) has identified at least 159 natural, semi-natural, managed, weedy and probable community types in Mississippi which includes 77 forest types. Those community types have been assigned priority conservation ranks indicating their relative endangerment or abundance. In 2005, the Mississippi Department of Wildlife Fisheries and Parks (MDWFP) led an effort to develop the state's first *Comprehensive Wildlife Conservation Strategy* (CWCS) as part of a nationwide initiative to improve biodiversity of wildlife species. The CWCS condensed the 159 community types identified by NHP into 64 types with a description of each community, the wildlife and fish species of concern associated with each type and identified the major threats and potential conservation actions needed to abate those threats. The community types were also

ranked for the purposes of prioritizing the community types that need immediate conservation action. Twenty of the 64 community types are forested and those forest community types that are described within the CWCS will also be used in this *Assessment of Need* (AON). Special thanks to the MDWFP's Museum of Natural Science for providing these detailed descriptions.

A short description of each is listed below that includes soil types and associated vegetation, the general location and its ecoregion(s). Also included is an estimate of the size (acreage) or extent of the community. This information is provided based on satellite based land cover classification extrapolated from the Mississippi Automated Resource Information System or MARIS database and from USDA Forest Service Southern Research Station statistics. These acreages should be used for planning purposes only.

Descriptions of conditions of each community type are excerpted from the NHP data base. The Conservation Status (also called Conservation Priority Ranks) was taken from NatureServe's description of ecological communities and was included to indicate the rarity (critically imperiled, imperiled, vulnerable to extirpation or extinction, apparently secure or demonstrably widespread, abundant or secure) of community subtypes that are cross walked with NatureServe's and NHP's ecological community types (see Appendix IV).



It is important to note that ecosystems can be lost or impoverished in basically two ways. The most obvious kind of loss is **quantitative** such as the conversion of a natural forest to a cotton field or to a parking lot. Quantitative losses can be measured easily by a decline in extent of a discrete ecosystem type (i.e., one that can be mapped). The second kind of loss is **qualitative** and involves a change or degradation in the structure, function, or composition of an ecosystem. At some level of degradation, an ecosystem ceases to be natural. For example, a tract of oak-hickory woodlands may be high-graded by removing the largest, healthiest, and frequently, the genetically superior trees. Qualitative changes may be expressed quantitatively but in less precise terms than estimates of habitat conversion. In some cases, as in the conversion of an old-growth forest to a pine plantation, the qualitative changes in structure and function are sufficiently severe to qualify as outright habitat loss. General forest cover statistics indicate a larger percentage of the Mississippi landscape is occupied by pine, hardwood or mixed forest types. However, the condition of the forest, whether cutover, natural, semi-natural or cultivated, is usually not available.

A. DRY TO MESIC (DRY TO MODERATELY MOIST) UPLAND FORESTS / WOODLAND

This forest type includes four subtypes:

- ◆ A.1 Dry Hardwood Forests
- ◆ A.2 Dry Longleaf Pine Forests
- ◆ A.3 Dry-Mesic Hardwood Forests
- ◆ A.4 Dry-Mesic Shortleaf/Loblolly Pine Forests.

A.1 DRY HARDWOOD FORESTS

The dry hardwoods subtype includes oak-cedar woodlands and dry upper slope oak-hickory forests. They occupy dry upland slopes and ridge tops with nutrient poor soils of various textures. Characteristic species of this subtype are oaks (post, southern red, blackjack and white) and hickories (mockernut and sand). Shortleaf and loblolly pines are commonly intermingled with the hardwoods. Representative understory species include farkleberry, oaks (seedlings, saplings), white ash and flowering dogwood. Within this subtype distinctive chestnut oak woodlands are found on sandy or shallow soils over sandstone/limestone in northeastern Mississippi. Oak-cedar woodlands are found on moderately shallow soils of uplands within the



MMNSMDWFP



blackland regions of northeast and central Mississippi, where Selma chalk or calcareous marls constitute the subsoil. Post oak woodlands are similarly found in the uplands of the northeast prairie region and elsewhere on deeper acid soils, often over calcareous substrates.

Ecoregions - EGCP, UEGCP

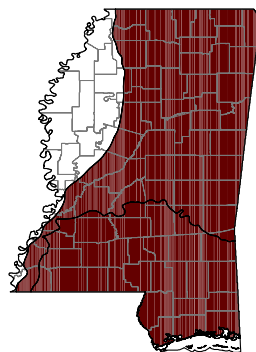
Location - Small, 50-100 acre patches on ridgetops and uplands that divide watersheds in the northern half of the state.

Size/Extent - 400,000 acres

Condition/Threats - Mesic hardwood and pine forests are situated below this community on mid-slopes. Stands of dry hardwood forests are interspersed with agriculture, commercial timberlands, homesteads and urban centers. Conversion of additional areas of dry hardwood forests to pine plantations, pastureland, urban and suburban development is a significant threat. Ridgetops are used for transportation corridors and the secondary development associated with roads. Dry hardwood forests are highly fragmented and considered to be in poor condition due to lack of fire management.

Conservation Status - **Imperiled** because of rarity due to extensive conversion to other cover types. Few stands are known to be in good condition and few are protected from conversion to other uses. Continuation of these threats will likely lead to additional declines.

CWCS Rank Among Forest Types - 7th of 20



Range of Dry
Hardwood Forests

A.2 DRY LONGLEAF PINE FORESTS

Sandhill longleaf pine, longleaf pine-blackjack oak and longleaf pine-saw palmetto forests collectively represent this forest subtype. They are found on mid and upper slopes, shoulder slopes and ridge tops. Soils are dry, well-drained to excessively well-drained sands and sandy loams. Two-thirds or more of the canopy trees are longleaf pine. The subtype includes both savanna and forest types. Several dozen less abundant species, such as turkey oak, sand post oak and flowering dogwood, may be present. Drought tolerant forbs (non-grassy herbaceous plants) are often isolated on these upland sites and are heavily dependent on prescribed fire, which prevents excessive shrub encroachment.

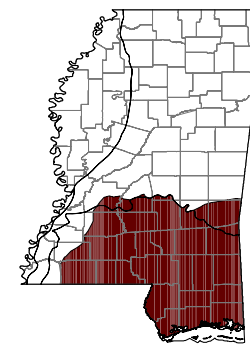
Ecoregions - EGCP, UEGCP

Location - Found 50 to 1000 acre patches on scattered ridgetops and isolated sandy uplands in south Mississippi. The uplands are insular patches situated within a matrix of mesic pine forests and habitats converted to other uses (plantations, suburbs, etc...).

Size/Extent - 40,000 acres



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Range of Dry
Longleaf Pine Forests



Condition/Threats - The upland sites that support this community have been used for road corridors, sand sources, and homesites; fire suppression, lack of controlled burning and conversion to other land uses, including pine plantations has serious qualitative and quantitative decline of this community. However, the Little Florida Conservation Site on the DeSoto National Forest is in excellent condition as are some other areas are devoted to the protection of the gopher tortoise.

Conservation Status - Critically imperiled in the state because of extreme rarity (few occurrences) and extensive degradation.

CWCS Rank Among Forest Types - 2nd of 20

A.3 DRY TO MESIC (DRY TO MODERATELY MOIST) HARDWOOD FORESTS

This hardwood type refers to a collection of dry to moderately moist mixed oak, oak-pine and mixed hardwood communities. This subtype is found on gentle to moderate mid- and lower slopes with deeper soils. Nutrient and moisture availability is somewhat higher and more available throughout the growing season. Soils are often moist, moderately-well-drained to well-drained and fine to loamy in texture. With its rapid ability to reseed and grow, white oak is one of the most important oaks and tends to dominate many stands in Mississippi. Loblolly pine, pignut



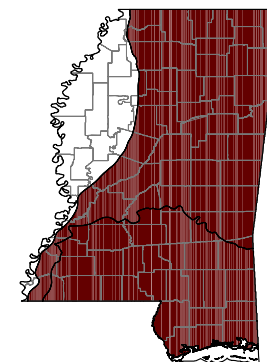
hickory and water oak are also common. Other oaks, such as post, Shumard and northern red exhibit lower reproductive rates and their abundance has probably decreased over time. Under standard forest management schemes, these species are less competitive than white oak and pines. Species have different environmental preferences within the mesic forest type: Shumard oak prefers fine textured soils; white ash, circumneutral soils; and tuliptree tulip poplar, areas with ample available moisture. Smaller or subcanopy trees and shrubs may include beech, hop hornbeam, flowering dogwood and sourwood. The maritime live oak forest habitat type, although considered an upland forest type, has been included with the maritime forests section discussed later.

Ecoregions - EGCP, UEGCP

Location - Found in 50 to 1000 acre patches in north Mississippi within a complex of pine and hardwood forests. The Tombigbee National Forest contains some prime examples of this forest type.

Size/Extent - Over 1 million acres

Condition/Threats - Many tracts containing this subtype have been converted to pine production, and very few forests of this subtype are managed with prescribed burns. Where fire management is used, there is a significant reduction in the density of shrubs and small trees and an increase in herbaceous ground cover.



Range of Dry to Mesic
(dry to moderately moist)
Hardwood Forests



Conservation Status - Vulnerable due to significant historical losses and recent conversion to other uses; lack of seasonally appropriate burning has resulted in deterioration of the remaining tracts.

CWCS Rank Among Forest Types - 10th of 20

A.4 DRY TO MESIC (DRY TO MODERATELY MOIST) **SHORTLEAF/LOBLOLLY PINE FORESTS**

Typical features of this community type are upland hills and flats, which contain soils with moderate depth and acidity, and low to moderate fertility and moisture. Managed and semi-natural stands of pines form the dominant cover type for much of the dry and mesic uplands of Mississippi. Pine plantations are discussed in Section B.



Shortleaf pine historically dominated upper slopes and droughty ridge tops along watershed boundaries in the cooler northern half of the state. Naturally occurring loblolly pine existed in pine and mixed hardwood-pine stands on moist upland flats, mid/lower slopes of drainageways and high stream terraces in areas merging with longleaf pine region and extending through central and northern Mississippi. Post oak, blackjack oak, scarlet oak and hickory, along with other hardwoods were commonly mixed with the pine on the drier sites with shortleaf pine often mixed with loblolly pine. Loblolly pine contributes more than 40 to 100 percent

of the tree cover on lower slopes and flats. Often subcanopy hardwood trees make up an additional 40 percent of the total cover. Hardwoods, including southern red oak, post oak, white oak, upland laurel oak, blackgum and sweetgum, are mixed with pine on better sites and make up about 80 percent of the subcanopy. Magnolia, shortleaf pine, tulip tree, hickories, oaks and other trees represent the remaining 20 percent. Herbaceous species become scarce in dense managed stands.

With the lack of fire management, a dense growth of hardwood trees, shrubs and vines pervade many pine stands and thick litter accumulates on the forest floor. On the mesic sites, pines receive considerable competition from vines, shrubs and hardwoods hardwood saplings and trees, especially during the early stages of forest regeneration. Pines quickly outgrow competitors and the extra shading reduces the presence and vigor of others. Shrubs readily regrow after cool season fires. In today's cutover forests, hardwood trees are mostly relegated to subcanopy stature due to their slow growth. Being shade-tolerant they are more tolerant of shading and persist beneath the pine canopy. Loblolly and shortleaf pine generally have a shorter life span than most hardwoods, and with time, pine trees age and they again become competitive. As gaps form in the canopy from aging pine trees, hardwood trees gain stature at a faster rate. After about 75 years or more, if undisturbed by human activities, hardwoods gain dominance, while pines are reduced to snags by insect damage or old age and subsequently are felled by windstorms.

Ecoregions - EGCP, UEGCP

Location - Found in small and large patches throughout the central and northern part of Mississippi. Shortleaf pine forests are usually found in



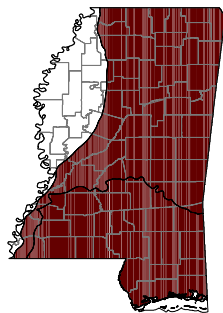
smaller patches on narrow ridgetops. The pine stands are interspersed with plantations, cutover areas and hardwood stands.

Size/Extent - 2.2 million acres (7.2 percent of state land area).

Condition/Threats - Increased stocking densities and lack of fire has decreased the quality of this extensive and widespread subtype. Some mature stands are managed by thinning and controlled burns. These thinned stands have a more productive ground cover and prove more valuable for wildlife. Many of the better managed stands are found in state wildlife management areas

Conservation Status - **Secure**, but there is some cause for long-term concern due to insufficient use of prescribed fire and increased stocking density for timber production.

CWCS Rank Among Forest Types - 12th of 20



Range of Dry-Mesic (dry to moderately moist) Shortleaf/Loblolly Pine Forests

B. OLD FIELDS, PRAIRIES, CEDAR GLADES AND PINE PLANTATIONS

This type includes three forest subtypes:

- ◆ B.1 Northeast Prairie/Cedar Glades,
- ◆ B.2 Pine Plantations
- ◆ B.3 Old Fields and Young Hardwoods (Shrublands)

B.1 NORTHEAST PRAIRIE/CEDAR GLADES

A portion of land historically supported native prairie vegetation in the Black Belt Prairie region, which extends from the Tennessee border in an inverted arc through Mississippi to eastern Alabama. Some prairies occurred on nearly level, deep, somewhat poorly drained clay soils. Attractive to the first settlers entering the state, these flat prairies, some of which were Indian old fields, were quickly converted to crop and pasture lands. No examples of this prairie type are



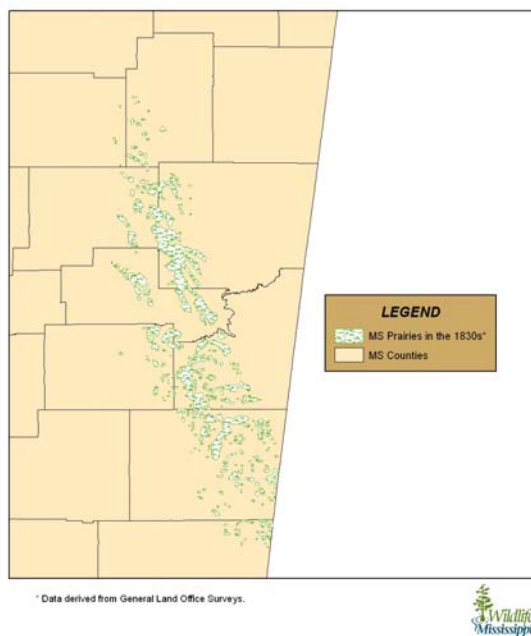
currently known. Another prairie type was found on mostly shallow soils of gentle to moderately steep areas. The soils are derived from the underlying Selma chalk, a calcareous stratum of the Cretaceous Period deposited over 65 million years ago. On such areas that were farmed during early settlement, erosion became a serious problem, as soils eroded away to expose the underlying grayish-white chalk layer along gullies and



occasionally wide patches. These marginal agricultural lands were subsequently abandoned and left as old fields or converted to pastures. In addition to early abandonment of marginal lands, many subsistence farms were later discontinued for economic reasons. Other lands associated with these operations were left fallow, pastured or planted with trees.

Prairie herbs and eastern red cedar shrubs were able to re-establish on the old fields. The clay soils are dark brown, alkaline and relatively high in organic matter. Eastern red cedar shrublands or cedar-oak woodlands often surround patches of prairies. The prairies of these shallow, eroded soils support a moderate to low density of grasses. Little bluestem, the dominant grass and other graminoids (grasses and sedges), including Cherokee sedge, yellow Indian grass, Florida paspalum and dropseed, produce most of the vegetative cover. However, many forbs, including a large number of rare species, add to their diversity. Prairie forbs include the prairie goldenrod, downy pagoda plant, diamondflower, white and

Extent and Location of Native Blackland Prairies in Mississippi in the 1830s (Barone 2005)



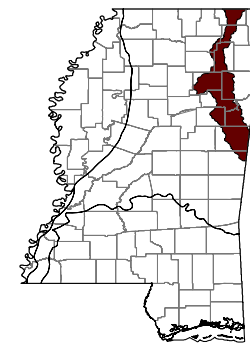
purple prairie clovers, purple and yellow coneflowers, rosin weeds, gayfeathers, false foxglove and a variety of asters.

Eastern red cedar trees in a mosaic of prairie grasses and forbs form cedar thickets or glades on many abandoned fields and cutover areas of the Black Belt Prairie region. Cedar thickets are occasionally found in the Jackson Prairie region and other parts of the state. The community is often found on hilly uplands with shallow, eroded, calcareous soils related to outcropping. Shading, heavy cedar litter or shallow soils reduce the amount of herbaceous cover, causing a barren appearance in places. Cherokee sedge is frequently found with redcedar. Many prairie grasses or forbs will occur scattered in openings and along the edges of cedar patches. A variety of shrubs or small trees such as Chickasaw plum, Chinkapin oak, Osage orange, eastern redbud and Carolina buckthorn may also be found.

Ecoregions - UEGCP

Location - The northeast prairie was formerly much more extensive; now found in 1 to 100 acre patches, mainly situated along road and power line corridors or on eroded old fields scattered through the northeastern blackbelt region and occasionally in the Pontotoc Hills region. Cedar glades are more abundant and cover wider expanses (~1,000 acres) of former crop or pasture land. The subtype is commonly situated in areas with shallow soils overlying chalk.

Size/Extent - 15,000 acres



Range of Northeast Prairie/Cedar Glades



Condition/Threats - Generally in poor condition due to conversion and lack of ecosystem management on remaining parcels. Prescribed fire is necessary to maintain the prairie species. Erosion has been extensive in areas with shallow soils. Because of the shallow soil, the residual community usually shows a lack of diversity and vigor. Agricultural usage has caused extensive destruction of these prairies. An exotic grass, pitted beardgrass, is becoming established on some prairie sites.

Conservation Status - Prairie component is **critically imperiled** in the state due to its extreme rarity, resulting from having a restricted range, agricultural conversion, and lack of management on the few extant prairie sites. Cedar glades, which are regarded as a degraded form of the prairie community, are **vulnerable** to decline because of conversions of many sites to improved pasturelands.

CWCS Rank Among Forest Types - 14th of 20

B.2 PINE PLANTATIONS

A wide range of upland habitats are suitable for growing pines in Mississippi. They grow best in moist, moderately acid soils. Loblolly, and less frequently, shortleaf pine have been planted over extensive areas of the state and presently occupy a wide variety of landforms and soil types. Slash pine plantations are popular in the piney woods region of southern Mississippi. Pine plantations have replaced large acreages of natural hardwood and longleaf pine forests. In Mississippi and much of the Southeastern U.S, loblolly pine is the preferred tree of the forest industry because of its rapid growth. Its distribution and abundance is much greater today than in pre-settlement forests.

Young plantations contain stands of pine that have trees averaging less than 15 feet tall. Southern yellow pines take about 10-15 years to reach tree size (15-18 feet) to overtop other competitive shrubs and trees. Rate of pine growth depends on such factors as

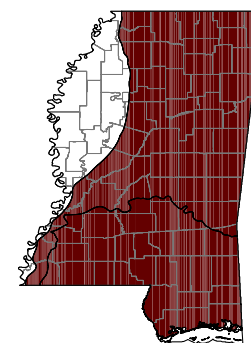
soil type, type of land treatment, stocking density and competition from other species. During initial growth stages, young pines are vigorous but less competitive. After the pines become established, the ground is heavily shaded and becomes littered with a thick mat of pine needles, which insulates the soil and prevents other herbs, shrubs and trees from growing in the stand. However, shrubs and trees persist in pine stands, even those with high pine stocking rates. Even-aged stands often form a closed canopy that strongly restricts competition. But, once a stand is thinned, more light will reach the forest floor and herb and shrubs will return. Longer term rotations will allow pines sufficient time to mature. As trees are thinned in mature pine stands, herbs and shrubs will become more productive.

Ecoregions - EGCP, UEGCP

Location - In all upland regions of the state except the Mississippi delta, parts of the loess



MMNS/MDWFP



Range of Pine Plantations



hills and the Black Belt region, there has been significant conversion of forest and abandoned croplands (some formerly prairie) to pine plantations. Parcels range widely in size but can reach several thousand acres in extent. Pine plantation blocks are interspersed with natural regeneration forests, shrublands, croplands and urban/suburban areas.

Size/Extent - Over 4 million acres, or 14 percent of the state.

Condition/Threats - Pine tree density is significantly higher in plantations than in natural forests, and the understory cover is commensurately reduced. Understory productivity increases as plantations are thinned. Establishing hardwood trees, leaving mature mast trees in the plantation, decreasing stocking densities and using controlled burns to manage brush encroachment can improve the pine plantations for wildlife. Some birds find pine plantations suitable for foraging habitat and deer and turkey use the heavy cover for concealment.

Conservation Status - Plantations are a **secure** subtype as they are widespread and abundant in the state.

CWCS Rank Among Forest Types - 15th of 20

B.3 OLD FIELDS AND YOUNG HARDWOODS (SHRUBLANDS)

Old fields or fallow lands contain a variety of annual and perennial weeds. Grasses such as purpletop tridens, velvet panicum, bristleglass, bahia grass and Johnson grass often flourish in these areas. Ideal growing conditions in the spring bring a flush of ephemeral herbs to mowed areas, waste places, vacant lots and roadsides. Spring grasses include bluegrass, Bermuda grass, cheatgrass, cattail sedge, little barley, little bentgrass and perennial ryegrass. Some of the common forbs are: bittercress,

butterweed, bedstraw, buttercup, chervil, chickweed, clover, cornsalad, corn speedwell, crowpoison, dandelion, fleabane, forget-me-not, garlic, lyre-leaf sage, plantain, spotted medick and toadflax. If fields and grassy openings are left unattended

over several years, many vines, shrubs and trees such as gallberry, possumhaw, eastern red cedar, Chinese privet, rattan-vine, persimmon, eastern baccharis, pines and hardwoods steadily advance into these areas. Herbs, vines and shrubs flourish as nutrients and light becomes available after logging.

During the succession back to forest cover, the herb phase commonly lasts from one to several years. Annual grasses and herbs are the first to invade exposed or cleared areas. Perennial grasses, forbs and vines such as greenbriers and blackberries are prolific as other shrubs become established. Shrubs, coppicing hardwoods (originating from roots or suckers) and seedling hardwoods then overshadow the openings and reduce the abundance of herbs.

Within five to ten years, shrubs and trees regain dominance. Scrub vegetation often contains a wide variety of opportunistic and invasive species like poison ivy, Japanese honeysuckle and Chinese privet. The southern upland type includes red maple, inkberry, yaupon, southern bayberry, various oak species and blueberries. The northern scrub-shrub type contains a variety of trees, shrubs, woody vines, including devil's



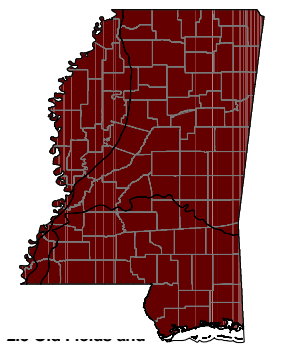
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walking stick, American beautyberry, common persimmon, sassafras, sweetgum, hickory, oaks (particularly water oak), sumac, winged elm, grapevine, Virginia creeper and poison ivy. Wetland scrub-shrub vegetation contains an abundance of vines including ladies' eardrops, grape, trumpet creeper, peppervine, Japanese honeysuckle and an assortment of shrubs, i.e., red maple, hickory, blackgum, giant cane, buttonbush, planer tree, ash, possumhaw, Chinese privet, sugarberry and hawthorn. The vegetation is deemed a forest once trees reach an average height of 15 feet tall. Trees that have wind dispersed seeds such as pines, sweetgum, ash, winged elm and red maple encroach into old-field openings. Hickories and oaks, which are dispersed by animals are often prevalent.

Ecoregions - EGCP, UEGCP, MSRAP

Location - Shrublands include cutover areas dominated by young hardwoods and shrub species released following canopy removal and old fields. Cutover areas are generally interspersed with pine and hardwood forest lands, and old fields are more commonly embedded in a landscape dominated by agricultural fields and pasturelands.



Range of Old Fields and
Young Hardwoods

Size/Extent - Approximately 5 million acres (about 16 percent of Mississippi)

Condition/Threats - The vegetation of this subtype is in transition as trees gain coverage and dominance of the stand. Shrublands are

particularly susceptible to invasion by aggressive exotic vegetation such as cogongrass.

Conservation Status - Shrublands are widespread, and abundant in the state and are secure from significant decline.

CWCS Rank Among Forest Types - 17th of 20



C. MESIC (MODERATELY MOIST) UPLAND FORESTS

This forest type includes four subtypes:

- ◆ C.1 Beech/Magnolia Forests
- ◆ C.2 Mesic Longleaf Pine Savanna/Forests
- ◆ C.3 Loess Hardwood Forests
- ◆ C.4 Lower Slope/High Terrace Hardwood Forests.

C.1 BEECH/MAGNOLIA FORESTS

This forest type is found on deep soils of stream terraces, deep loess of protected slopes along draws and areas of coarse-textured sandy or gravelly substrates that receive seepage from adjacent uplands. Substrates generally remain moist

throughout the growing season. Since beech and magnolia are of limited commercial value, other species of trees are promoted after logging. Beech and magnolia trees are found as common sub-canopy trees of some mature pine and hardwood

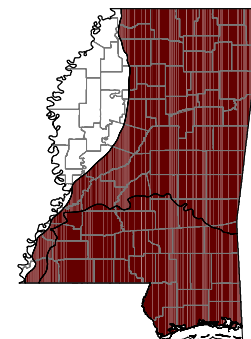


stands of the southern loess hills. If allowed to recover after clearing, a beech/magnolia forest may take a century to re-establish itself. Other important trees of this community include white oak, tuliptree, sweetgum, water oak and spruce pine. Sub-canopy trees may include bigleaf magnolia, ironwood, sourwood, American holly and flowering dogwood. Six magnolia species may be encountered in this forest type: southern

magnolia -- the most common upland magnolia, sweetbay, pyramid, cucumber tree, big leaf and rarely, umbrella magnolia. Florida anise, witch-hazel, wild azalea, Elliot's blueberry and giant cane are common understory constituents.

Ecoregions - EGCP, UEGCP

Location - Isolated small to medium-sized patches (100-1000 acres) throughout the southern part of the state but are most commonly encountered in the loess bluff region. The community occurs on isolated steep hilly areas or blufflands, protected coves and along mid and lower slopes of ravines, draws and river valleys.



Range of Beech/
Magnolia Forests

Adjoining uplands support or originally supported mesic hardwood forests in the loess hills and expansive pinelands in the Piney Woods region. Some protected areas in the Homochitto National Forest, the Desoto National Forest, the Natchez Trace National Parkway and the Clark Creek Natural Area present interesting examples of this subtype.

Size/Extent - Over 80,000 acres.

Condition/Threats - Beech/magnolia forests require over 70-100 years to reach maturity. Due to extensive logging, this community has been lost at many sites and may only support successional vegetation at others.

Conservation Status - Formerly widespread and abundant, this community is **critically imperiled** because of extreme rarity (few occurrences) and has disappeared in many areas due to logging, site conversion and urbanization.

CWCS Rank Among Forest Types - 13th of 20



C.2 MESIC (MODERATELY MOIST) LONGLEAF PINE SAVANNA/FORESTS

This forest type occurs on deep, well-drained to moderately well-drained, permeable soils on uplands and stream terraces of the Piney Woods region in southern Mississippi, an area that receives 60 inches of precipitation annually. The historical longleaf pine forest extended from the wetlands of the coast to the mixed pine-hardwood forests of central Mississippi and from the border of Alabama to the loess hills. Fires maintained forests and savannas of massive, well-spaced longleaf pine trees. Combustible leaf litter and grassy understory carried natural wildfires through the longleaf region. Sampling of virgin forests over a century ago indicated that tree densities averaged about 100 per acre, or 400 square feet per tree. With the wider spacing of trees, ample sunlight was able to reach the forest floor and support a diverse cover of herbs.

While many stands are pure longleaf pine, they average over two-thirds of the canopy cover. Loblolly and slash pine are common in some stands. Blackjack, post oak and southern red oak trees are also locally common. In some stands not managed with fire, dense shrub and vine thickets, reaching 6 to 15 feet in height, will shade out the normally rich assemblage of herbs. Trees and shrubs that increase dramatically with a lack of prescribed fire include slash pine, sweetgum, red maple, large gallberry, inkberry, yaupon, titi and common sweetleaf. Fire tolerant shrubs include farkleberry, southern bayberry, flameleaf sumac and dwarf huckleberry.

Over 100 species per quarter acre are found on the richest fire maintained sites, with each of the life forms, shrubs, grasses and forbs, accounting for one-third of the ground cover. The most important plant groups are

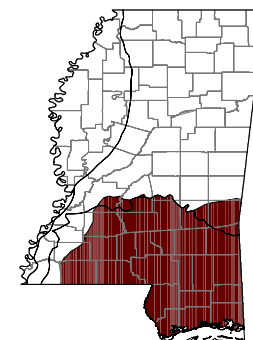
the grasses, asters and legumes. Little and slender bluestem grass and wiregrass are especially important in mesic longleaf forests. Other prominent species are cutover muhly, panic grass, paspalum and toothache grass. Narrowleaf silkgrass, one flowered honeycombhead, anise-scented goldenrod and stiff sunflower are representative of the numerous forbs encountered.

Ecoregions - UEGCP, EGCP

Location - Mesic longleaf pine savanna/forests were the most extensive community type of the piney woods region of southern Mississippi. Only a fraction of the original forest remains (about 3 percent). Some large tracts of this subtype are found on the De Soto National Forest and a few private holdings. Bogs are embedded within this habitat in some areas. Many sites in the Piney Woods have been converted to commercial timber production and are typically planted in offsite species such as loblolly or slash pine.

Size/Extent - Tracts supporting this forest subtype range up to 10,000 acres but many tracts are much smaller. Total acreage of the subtype is estimated to be 67,000 acres.

Condition/Threats - High quality stands of this community consist of low to moderately dense forest cover with a highly diverse understory. Urbanization and proliferation of roads within surrounding private lands has increased the difficulty of properly managing this habitat with prescribed fire. The diversity and quality of the mesic pinelands



Range of Mesic (Moderately Moist)
Longleaf Pine Savanna/Forests



deteriorates if growing season fire is not regularly applied. Brush encroachment is especially troublesome for managers of this community. Spring season burns tend to favor grasses over forbs and causes a reduction in forb abundance and seed production. Dormant season burning will not effectively control stem proliferation of shrubs and sapling hardwoods, and may in fact encourage an increase in stem density over time.

Conservation Status - Imperiled in the state because most of the once extensive community has been converted to other cover types. Although some losses are still occurring, there is a growing effort to replant large acreages of longleaf pine in the piney woods region. Because of the presence of roads, human dwellings, and the aggressively invasive cogongrass, prescribed fire is becoming more difficult to apply.

CWCW Rank Among Forest Types - 6th of 20

C.3 LOESS HARDWOOD FORESTS

The loess hills region is a range of steep, highly dissected hills and bluffs situated along the eastern flanks of the Mississippi River Alluvial Plain. Deep silty soils were formed from wind-carried (aeolian) sediments along a narrow band extending from Louisiana northward into Tennessee. The band of silt reaches hundreds of feet in depth near the alluvial plain and gradually diminishes towards the east, finally becoming inconsequential about 50 miles away from the river. At the eastern edge of the region, the loess soils are present on lowlands but missing from hill tops where it has been removed by erosion. Memphis and Natchez soil series are the most prevalent soils of the loess or brown loam region. They are characterized as deep, moderately permeable, well-drained silty soils. Slopes are often

steep and can range up to 45 percent and occasionally form sheer cliffs. They have moderate fertility and moisture holding capacity. Important trees of the area include many types of hardwoods, especially cherrybark oak, but also water oak, swamp chestnut

oak, tulip poplartree, Florida maple, eastern hophornbean, ironwood, sassafras, pignut hickory and two-wing silverbell. Beech and magnolia are less important. Sweetgum, sugarberry, boxelder and red maple are probably more common now than before settlement. They have replaced some of the more traditional climax trees that were once abundant in the diverse virgin forests such as American basswood and black walnut. Due to the abundance of walnut, Vicksburg's early settlement was named Walnut Hills. Important common small trees, shrubs and vines include pawpaw, red buckeye, flowering dogwood, northern spicebush, oakleaf hydrangea and grape vines.

Ecoregion - UEGCP, EGCP

Location - Found on large tracts of up to 10,000 acres in the loess bluff region of the state.

Size/Extent - 300,000 acres

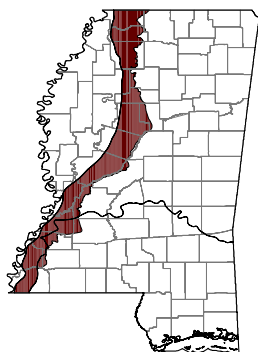
Condition/Threats - Encroachment of homesteads into otherwise undeveloped areas, agriculture, clearcutting, conversion of hardwood



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forests to pinelands, and invasion by the forest-topping invasive kudzu have contributed to destruction and fragmentation of this forest type. Adjoining ridgetops support dry/mesic hardwood forests and larger streams support lower slope/high terrace hardwood forests.



Range of Loess
Hardwood Forests

Historically the region experienced widespread agriculture development even in steep areas. Consequently much of the region experienced significant erosion on the slopes grossly excessive sedimentation on adjoining terraces and in streams. The silty loessal soils are highly erodible in nature. Subsequent to this erosion cycle, much of the region was abandoned with respect to agricultural pursuits, allowing return of forest cover, and some areas have recovered to the point that it is difficult to discern that they were formerly in cultivation. The steepest areas remain the least likely to have been abused and maintain some of the highest diversity. Some lands are managed for hardwood timberland, but the risk of erosion during logging of these sites is often high. Chinese privet, an exotic shrub, has thoroughly infiltrated these forests, and is especially abundant in forests surrounding urban areas.

Conservation Status - Imperiled in the state because of extensive habitat modification following erosion problems caused by historical agricultural conversion, and because of the current threat of additional fragmentation resulting from homesteading and urbanization around population centers. Invasion of exotic shrubs and kudzu, and problems associated with commercial timber management (this includes conversion

to pine forests and regeneration problems following clearcutting or high-grading of hardwood forests) are other factors that render this subtype vulnerable to additional decline.

CWCS Rank Among Forest Types - 11th of 20

C.4 LOWER SLOPE/HIGH TERRACE HARDWOOD FORESTS

The moderately moist and occasionally wet (palustrine) hardwood forest habitats of this type are found on lower slopes and high terraces of streams and rivers of Mississippi. Small drainageways, floodplains, stream terraces, levees, low moist plains, and some lower slopes are landforms that support this vegetation type. The lowlands have soils ranging in textures from clay and silty to, occasionally, sandy loam. The coarser textured soils are usually found on ancient secondary terraces. Although these landforms occasionally flood, they often have deeper soils and receive lateral subsurface seepage and surface runoff from adjacent uplands. Their low position on the landscape ensures that the habitat remains moist during the growing season. This forest type often has an elevated water table during the late winter and early spring. However, the water table will drop precipitously during early spring growth.



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Lower slope/high terrace forests include mixed hardwood, sweetgum – mixed oak and hardwood pine types. Important species include

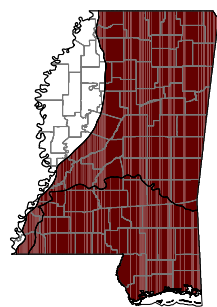


sweetgum, water oak, cherrybark oak, white oak, swamp chestnut oak, willow oak, and pignut hickory, bittersweet hickory and shagbark hickory. Loblolly and spruce pine are locally common. Shrub and small tree associates include ironwood, winged elm, red maple, possumhaw, sugarberry, pawpaw, common sweetleaf and giant cane. Partridge berry, netted chainfern, Jack-in-the-pulpit, common lady fern, small-spice false nettle, jumpseed, mayapple and wild petunia are other representatives of the herb layer.

Of historical significance are the canebrakes of the Mississippi riverine areas. Extensive impenetrable giant cane thickets that were apparently mostly devoid of trees formed along the levees of stream corridors where intense fires apparently killed larger trees and subsequently prevented their re-establishment. With fertile soil and lack of trees, canebrakes were among the first lands selected for farming by early settlers. Because of their rapid conversion to agriculture, little is known about the ecology of these areas.

A few localities in the Mississippi delta still contain canebrakes. Other non-cultivated habitats that still contain canebrakes have become dense with trees creating a sparser, less vigorous growth of giant cane. Of particular note is the extirpation of the Bachman's warbler, which was last heard in canebrakes, their required habitat.

Ecoregion - EGCP, UEGCP



Range of Lower Slope/
High Terrace
Hardwood Forests

Location - Found in narrow linear patches from 100 to 10,000 acres in size along small creeks, where flooding is minimal and/or of brief duration. On larger streams and rivers, they are situated on high terraces and levees, and are bounded at the lower end of the mesosere by the wetter bottomland forest type and at the higher end of the mesosere by moist upland areas.

Size/Extent - Nearly 900,000 acres.

Condition/Threats - Being somewhat drier than bottomland forests, these forests have experienced a greater degree of conversion, fragmentation and logging pressure. These forests are valued because of their high productivity. Many areas that formerly supported this subtype have been converted to pine plantations.

Conservation Status - Vulnerable in the state due to its somewhat restricted distribution, and by recent and widespread declines caused by increased logging pressure, conversion to other uses and fragmentation (particularly around urban areas).

CWCS Rank Among Forest Types - 5th of 20



D. BOTTOMLAND HARDWOOD FORESTS

This forest type includes one subtype:

◆ D.1 Bottom Hardwood Forests

D.1. BOTTOMLAND HARDWOOD FORESTS

Moderately wet bottomland hardwood forests are found on fertile, fine textured clay or loam soils of floodplains, stream terraces and wet lowland flats. The Sharkey soil series is the most prevalent soil type supporting this community. The series consists of extensive flats of very deep, poorly and very poorly drained, very slowly permeable alluvial clays. Sugarberry-American elm-green ash, sweetgum-mixed oak and Nuttall oak-American elm-pecan are representative communities of the low terrace (moderately wet) bottomland hardwood forest type. Prevalent trees include willow, water, overcup and Nuttall oaks, pecan, sugarberry, American elm, green ash and sweetgum. Other subcanopy species include possumhaw, stiff dogwood, boxelder, dwarf palmetto and giant cane.



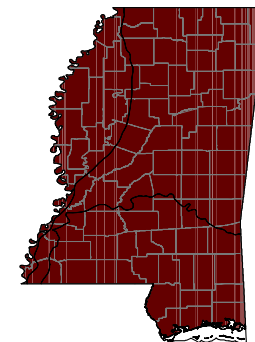
Though prominent in the Mississippi River Alluvial Plain, wet bottomland forest type occurs elsewhere along smaller streams in Mississippi. Wet bottomland hardwood forests are found on landforms such as floodplain backwater depressions, swales, low terraces and wet flats that are exposed to flooding of greater frequency and duration.

Substrates are fine textured because river flows are slow or stagnant when deposition occurs. The clayey or loamy soils help to hold water for longer periods. Water hickory-overcup oak forest type is found on the wettest sites and at the edges of swamp depressions and oxbow lakes, while willow oak, water oak and swamp laurel oak are found on wet clay flats. Small trees and shrubs may include silver maple, planer tree, swamp privet, dwarf palmetto, American snowbell and possumhaw. Wet bottomland hardwoods contain some of the best remaining habitats for bats. Studies have shown that old-growth bottomland hardwood forests are critical habitat for 11 of 18 bat species found in the Southeast.

Ecoregion - EGCP, UEGCP, MSRAP

Location - Bottomland hardwood forests occur in linear patches on floodplains along creeks and rivers. Several large patches of 50 to 100,000 acres are found along lowland stretches of the Pascagoula and Pearl River and in the Mississippi Delta; however the total acreage of smaller bottomland hardwood forests along smaller rivers is substantial. Except in the Delta, where they occur within wide expanses of agricultural land, these forests are adjoined by upland hardwood and pine forests, urban lands and smaller agricultural holdings.

Size/Extent - Collectively, bottomland hardwood forests encompass approximately two million acres, comprising almost seven percent of the state's land area.



Range of Bottomland
Hardwood Forests



Condition/Threats - Bottomland hardwood forest losses have been primarily attributed to the conversion of land to agricultural production; however, construction and operation of flood control structures, reservoir creation, surface mining, urban development, and exotic weeds and insects are also negatively affecting these forests. Due to drainage efforts, levee construction, improved road access, increased agricultural usage and closer proximity to development, the remaining bottomland hardwood forests are fragmented and many no longer perform free ecosystem services such as flood water storage, nutrient trapping, groundwater recharge and wildlife habitat. However, due to flooding frequency this habitat is difficult to convert into other uses, and many patches of bottomland forest have been conserved because of their increasing value for outdoor recreation such as fishing, hunting and hiking.

Conservation Status - Bottomland hardwood forests are **vulnerable** in the state due to widespread conversion in the past; other factors that contribute to fragmentation and a reduction of the ecosystem's health will lead to further declines.

Rank Among Forest Types - 3rd of 20

E. RIVERFRONT PALUSTRINE (MOIST) FLOODPLAIN FORESTS

This type includes one forest subtype:

◆ E.1 Cottonwood/Black Willow/River Birch Woodlands

E.1 COTTONWOOD/BLACK WILLOW/RIVER BIRCH WOODLANDS

Black willow and eastern cottonwood are the dominant species of riverfront communities along the Mississippi River Alluvial Plain and the Big Black River, but American sycamore and river birch may dominate other riverfront communities. Boxelder, sugarberry and silver maple are also commonly

present. The riverfront forests may last for over 50 years before the canopy trees begin to senesce (age and decline). In time these forests gradually become more diverse in shrubs, vines and

herbs. Common shrubs include eastern swamp privet, planer tree and sandbar willow. Vines are often plentiful along shorelines and openings in the canopy. Some of the common ones include: peppervine, trumpet creeper, climbing hempvine, oneseed bur cucumber, poison ivy and riverbank grape. Because of the length and frequency of flooding, herbaceous cover is often rather sparse. Some of the common herbs



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include careless weed, halberdleaf rosemallow, whitestar, rough cocklebur, Virginia dayflower and balloon vine.

After the riverfront floodplain has stabilized for several years or more, other bottomland species that tolerate shading, such as green ash, American elm and sugarberry become established. As succession continues and/or if the river shifts laterally away from its former bank, a more stable landscape enables the forest to succeed to other bottomland forest types that prefer soils higher in organic matter.

Ecoregion - EGCP, UEGCP, MSRAP

Location - This subtype is especially prominent in the batture lands of the Mississippi River, where cottonwood and willow are found in extensive linear patches. It also occurs in smaller patches along other rivers of the state. It flourishes along channels where nutrient poor mineral soils are exposed after flooding. The woodlands are replaced by bottomland hardwood forests as the distance increases from the main channel.

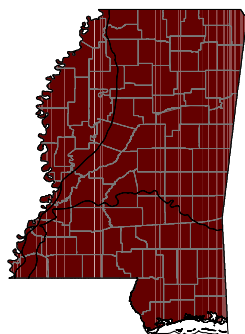
Size/Extent - Approximately 80,000 acres

Condition/Threats - This forest type has declined in some areas because of flood control projects which have altered the natural flow regimen of southern river systems. Loss of the scouring action of streams subsequent to impoundment reduces the hydrologic forces that rework the channel, and which expose the mineral soils necessary for the

germination and establishment of cottonwood and black willow trees. However, myriad channelization projects have destabilized other drainage systems, resulting in lots of bare mineral soil available for colonization by these species.

Conservation Status - **Vulnerable** in the state due to modification of drainage hydrographs which produce seedbeds for these species.

CWCS Rank Among Forest Types - 16th of 20



Range of Cottonwood/
Black Willow/River Birch
Woodlands



F. WETPINE SAVANNAS / FLATWOODS

This forest type includes two subtypes:

- ◆ F.1 Wet Pine Savannas
- ◆ F.2 Slash Pine Flatwoods

F.1 WET PINE SAVANNAS

The wet pine savannas are not associated with riverine floodplains, but areas found on broad coastal flats and sloping plains that annually receive over 60 inches of rainfall and remain saturated for long periods during the growing season. Seepage zones are commonly observed along lower slopes. The coastal region receives ample growing season rainfall from the frequent convective thunderstorms, resulting in the surface horizon remaining saturated for extended periods because of the slow permeability of subsoils.



The herbaceous groundcover of the wet savannas is exceptionally diverse in stands that are in good condition. Ample sunlight and rainfall create ideal growing conditions, but a lack of soil nutrients prevents any one species or suite of species from dominating. Of more than 200 understory plants, two-thirds are graminoids and one-third consists of forbs and ferns. Prominent groups of herbs include grasses, asters, sedges, pipeworts, pitcherplants and lilies. Common grasses include

beaksedge, toothache grass, switchgrass and three-awn. Forbs include rayless goldenrod, one flowered honeycombhead, sunflowers, pitcherplants, meadow beauties, sundews and orchids.

Ecoregion - EGCP

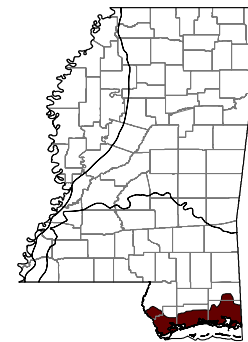
Location - Several large patches of the wet pine savannas subtype have been protected and others are being restored within the 19,000 acre Sandhill Crane National Wildlife Refuge. Only a few other wet pine savannas remain protected outside the refuge; these include the Lakeshore Savanna managed by The Nature Conservancy and the Grand Bay National Wildlife Refuge.

This forest type occurs on wetland flats when soils become waterlogged from heavy winter/spring rainfall and frequent thunderstorms during the summer.

Size/Extent - Approximately 80,000 acres

Condition/Threats - Adjoining lowlands support swamp vegetation and uplands support mesic longleaf pine forests. Development on surrounding private lands is rapidly enveloping the public lands. Pine plantations are commonly encountered in the vicinity of the refuge.

It is estimated that less than five percent of the original acreage of wet pine savannas exists. The Mississippi Sandhill Crane National Wildlife Refuge contains some of the largest remaining tracts of this unique ecosystem. The disappearance of the other areas is due to urban development and their conversion to pine plantations.



Range of Wet Pine Savannas



Conservation Status - Wet pine savannas are **imperiled** in Mississippi because of rarity due to their having a very restricted range and very few remaining stands. Lands devoted to timber production are continuing to decline because of the increase in shrub density.

CWCS Rank Among Forest Types - 19th of 20

F.2 SLASH PINE FLATWOODS

Slash pine flatwoods are limited to moist, poorly drained sites, which occasionally occur on ridge crest depressions, but more commonly, along lower slopes and broad flats, at the headwaters of streams, on wet peaty soils and on low terraces of major streams. Moisture determines the dominant pine species with slash replacing longleaf on wetter sites. Scattered loblolly pine may also be present in the canopy. In many instances the soils are nutrient poor and wet. On wetter situations, the pines are stunted and stressed by the wet conditions. Soils of pine flatwoods have restricted permeability in their subsurface horizons, causing long periods of saturation.

Red maple, sweetbay and tulip poplartree, common as low shrubs and trees in the subcanopy, occasionally attain



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a height that reaches into the canopy. If fire is not frequently prescribed, the shrub layer can become dense and impenetrable, with titi, buckwheat tree, gallberries and bayberries. Pitcher plants, St. John's-wort and numerous grasses often occur on exposed, open patches where water pools or recent burns have killed shrubs. Frequency of fire determines the height and density of the shrub layer while soil type appears to influence the presence of buckwheat tree. Associated with the Atmore soil series, the buckwheat tree dominates the understory and in some instances reaches diameters of over six inches and heights of over 25 feet. If fire is excluded, the open, herbaceous character of the pitcher plant flat is lost and titi thickets consisting of evergreen shrubs, become dominant. Titi thickets are most prevalent on sandy soil in draws and flats along drainageways and creeks of the lower coastal plain. They are situated in seepage zones on lower slopes of sandy uplands and along creek channels with high water tables. The shrubs aggressively encroach into moist uplands if fire is not suppressed.

Swamp titi and buckwheat tree are the most common shrubs. Other common shrubs are fetterbush, large gallberry and bayberry. Shrubby swamp trees, including sweetbay, blackgum and slash pine, are often sprinkled throughout the thickets. Ground surfaces are fully shaded and usually exhibit an accumulation of litter. Large amounts of leaf litter often become trapped in branches and build up on the ground. These conditions limit the presence of herbs.

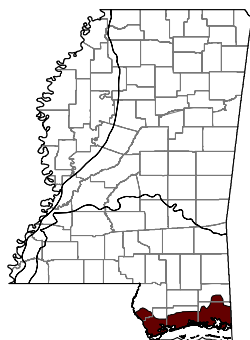
Titi thickets are an association of shrubs, vines and small trees that persist until being felled by logging or consumed by fire. Stands often become an impenetrable mass of thorny vines (mostly catbrier) woven throughout the dense shrubbery. Thickets can be virtually inaccessible by humans



until plants become older, taller and more widely spaced. Shrubs become trees with large trunk dimensions and heights over 25 to 40 feet.

Ecoregion - EGCP

Location - These forests are often situated on broad lowland flats and along drainages which dissect low hilly uplands that support mesic longleaf pine forests. They occur in moderate sized patches, from 50 to 1000 acres in size. The forests adjoin swamp forests near larger creeks.



Range of Slash Pine Flatwoods

Size/Extent - There are approximately 150,000 acres of this subtype.

Condition/Threats - This subtype is often in poor condition because of the lack of prescribed fire to control shrub encroachment. The stands become impenetrable thickets if fire is not allowed. There are significant acreages of this subtype still intact, albeit in poor to fair condition. Commercial timberlands of this subtype are often bedded and planted to pine to increase the timber production.

Conservation Status - This community is **vulnerable** in the state because of recent and widespread declines in the extent of this subtype; a lack of fire has allowed many of these stands to become impenetrable shrub thickets.

CWCS Rank Among Forest Types - 20th of 20

G. SPRING SEEPS

This type includes two subtypes:

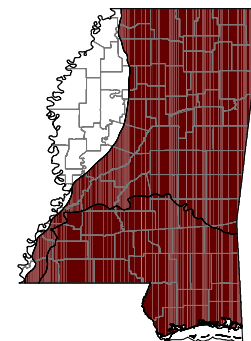
- ◆ G.1 Hardwood Seeps
- ◆ G.2 Pine Seeps

G.1 HARDWOOD SEEPS

Soils of hardwood seeps are often saturated throughout the year. This subtype supports wetland grasses, sedges, herbs and an abundance of ferns. Ferns frequently encountered are netted chainfern, royal fern, cinnamon fern and southern common lady fern. Other herbs include giant cane, crossvine, bristly stalked sedge, climbing hydrangea and roundleaf goldenrod. Wetland shrubs found clustered around seeps include Virginia sweetspire, poison sumac and possumhaw. Common trees are sweetbay, blackgum, red maple and tuliptree.

Ecoregion - EGCP, UEGCP

Location - Hardwood seeps are scattered throughout the state where water bearing substrates produce outflows. They occur as small wetland patches (1-10 acres in size) in draws and along lower hill-slopes. They are surrounded by upland hardwoods or open fields and pastures. The flow rate of the springs and the size of wetland that accompanies the spring can vary dramatically. Vegetation of spring heads depends on the duration of soil saturation and the slope of landforms supporting it. The effect of spring



Range of Hardwood Seeps



water temperature and water chemistry on the flora and fauna of springs still need to be explored.

Size/Extent - Estimated 500 acres to thousands of acres.

Condition/Threats - Some hardwood seeps have been damaged by development in the surrounding uplands, where changes in subsurface water flow have resulted. Others may have been drained by ditching to reduce the size of wetlands. Many survive as disturbed communities while others still persist undisturbed and in stable communities. Because of their widespread and sporadic occurrence, little is known about their overall condition.

Conservation Status - Wet calcareous cliffs are **very rare**, only occurring in the Tennessee River hills region (far northeastern part of the state). The more widespread hardwood seeps are considered **vulnerable** due to a lack of high quality spring sites that have been documented.

CWCS Rank Among Forest Types - 4th of 20

G.2 PINE SEEPS

Pine seeps have a similar composition to bog habitats and a somewhat similar complement of ferns as found in hardwood seeps. Pine seeps are named after the Piney Woods region of Mississippi where they are found. The overstory typically includes slash pine, but there may be a large presence of other swamp species such as sweetbay and blackgum. Virginia chainfern and poison sumac are particularly common.

Ecoregion - UEGCP, EGCP

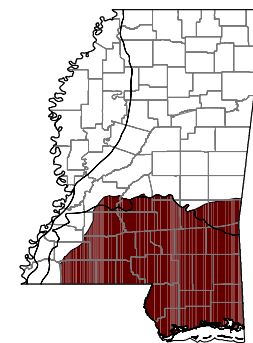
Location - Pine seeps are found in a variety of habitats and are often surrounded by pine timberland. They are usually small in size, less than one acre, but the spring waters may feed larger wetland complexes nearby

Size/Extent - Approximately 500 acres.

Condition/Threats - Pine seeps may be destroyed if they are in the way of some developments, such as highway construction, and alternatives to conserve the spring are not apparent. Hill top sand and gravel mining and surface and gully erosion will affect the subsurface flows that feed springheads. Sometimes seeps are less likely to be impacted by humans because of construction hazards in seepage zones. Little is known about the number or overall condition of pine seeps. Pine seeps are highly regarded as wildlife habitat.

Conservation Status - **Imperiled** in the state because of their average small size and vulnerability to further decline due to land use changes and other developments.

CWCS Rank Among Forest Types - 18th of 20



Range of Pine Seeps



H. SWAMP FORESTS

This forest type includes two subtypes:

- ◆ H.1 Bald Cypress/Gum Swamp Forests
- ◆ H.2 Small Stream Swamp Forests

H.1 BALD CYPRESS/GUM SWAMP FORESTS

Oxbow lakes, low floodplain terraces, bottomland flats, backwater areas or springheads are common areas to find swamp-forest vegetation. The soils of swales or depressions are seasonally to semi-permanently flooded and remain saturated for long periods throughout the year. These swamps contain a variety of mixtures and densities of bald cypress, blackgum, water tupelo and other hardwood trees. Silver and red maple, persimmon, green ash, ironwood and water oak are occasional associates. Shrubs may include buttonbush, eastern swamp privet and Virginia sweetspire. A suite of herbs similar to those listed in the marsh section are also present, and their abundance is greatly influenced by shade. Whitegrass, water willow, swamp sedge and opposite-leaf spotflower are persistent in shady swamps. Some swamp wetlands are shrubby, containing large patches of buttonbush, swamp privet and/or planertree.

Ecoregion - EGCP, UEGCP, MSRAP



MMNSMDWFP

Location - This subtype is found in a wide range of sizes, generally conforming to the size of the depression in which they occur. Swamps occur around oxbow lakes and along abandoned stream channels such as those riverine channels that transect cropland areas in the Mississippi delta and in the batture lands along the Mississippi River. They also are situated in smaller backwater areas of creeks in other parts of the state, where they occur adjacent to other bottomland hardwood forest types.

Size/Extent - Approximately 400,000 acres

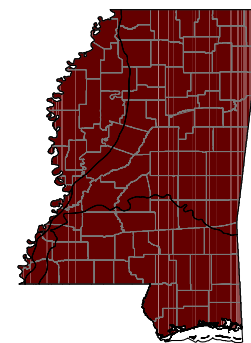
Condition/Threats - The annual losses of forested wetlands in Mississippi during the 1960's and 1970's were estimated to be about 0.5 percent per year. Fragmentation, developments near swamp lands, and logging of mature stands has reduced the quality of this subtype.

Conservation Status - Vulnerable due to historic widespread declines and recent losses due to a wide range of developments that create additional isolation and fragmentation.

CWCS Rank Among Forest Types - 8th of 20

H.2 SMALL STREAM SWAMP FORESTS

The lower Gulf Coastal Plain has a dense network of brooks, creeks and rivers. The uplands serve as infiltration zones that produce seepage beds along lower slopes and intervening drainages. Many of the smaller creeks are not deeply incised because of low coastland relief and the lack of



Range of Bald Cypress/Gum Swamp Forests



stream headcutting. Their floodplains are often protected by a dense mat of interwoven roots, especially those of sweetbay and blackgum. The poorly drained sandy and loamy soils hold moisture through dry seasons and most droughts. The wettest zones of the seepage areas and creek channels support a growth of sphagnum moss. The anoxic, acidic conditions prevent decomposition of leaf litter and help in the formation of organic muck soils.

The bay forest swamp occupies semi-permanently saturated sandy or humic, acid soils. Species composition varies depending on moisture and soil characteristics.

Sweetbay and blackgum are the most common trees. Pond cypress is locally common on wetter sites near the coast. Red maple, slash pine, sweetgum, tuliptree, swamp laurel oak and water oak are also common. Longleaf pine, spruce pine and beech are occasionally encountered. There are often extensive thickets of shrubs and small trees including swamp titi, large gallberry, bayberry, American holly, azalea, blueberries and Florida anise. Bay swamps usually have a scant cover of herbs due to the heavy shading of the tree and shrub layers and contain patches of sphagnum moss. Waterwillow, giant cane, panic grass, cinnamon fern and netted chain fern are sprinkled throughout the community. Titi thickets can be created by logging small stream swamp forests and wet savannas. Exposing the lower shrub layer to sunlight allows the shrubs to flourish

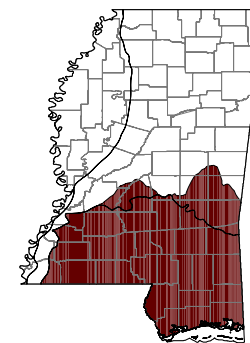


MMS/MDWP

and increase in density that can limit the regeneration of swamp trees. Unless the thickets are burned or mechanically chopped, they persist for long periods. Thickets may succeed to swamp forest vegetation once larger trees overtop the titi shrubs.

Ecoregion - EGCP, UEGCP

Location - Small stream swamp forests consist of several communities that are situated on bottomlands of small streams in the Piney Woods region. The patches are long narrow wetland habitats, which may reach up to 1000 acres in size. They are often transected by transportation and power line corridors. They are found between the stream channel and pine forests on the adjacent uplands



Range of Small Stream Swamp Forests

Size/Extent - Approximately 50,000 acres.

Condition/Threats - Wetlands are afforded greater protection from logging on national forest lands and less frequently on private lands where streamside management zones are established. Establishment of pine plantations on adjacent uplands can also reduce the quality of these swamp forest habitats because they occur in narrow patches. Excessive intrusion and fragmentation that is occurring in urban and suburban lands has caused additional deterioration of small stream swamp forests. Headcutting, a process in which downcutting of the streambed improves the drainage of swampy lowlands, is a detriment to small stream swamps. With a lack of periodic fires to reduce shrub densities, these forests become inaccessible thickets of evergreen shrubs. White cedar swamp



forests, one of the rarest communities of this subtype, have been severely degraded in southern Mississippi by road building and logging. The pond cypress swamp forest, another community of this subtype is also very rare because their range is limited.

Conservation Status - The community that makes up a majority of this subtype is **vulnerable** to further decline due to a lack of prescribed fires and encroachment and fragmentation caused by urbanization. Other less extensive communities of this subtype are considered very rare (white cedar swamp forests and pond cypress swamps) and critically **imperiled**.

CWCS Rank Among Forest Types - 1st of 20

I. UPLAND MARITIME AND ESTUARINE FRINGE

This type includes only one forested subtype:

◆ I.1 Maritime Woodlands

I.1 MARITIME WOODLANDS

The maritime slash pine flatwood/savannas community marks a scenic backdrop to the intertidal marshes along Mississippi's coastline. This community occupies ancient low shoreline beach ridges and low flats situated immediately inland

from the tidal marshes. It is also found on the terrace levees of many tidal creeks, occasionally extending into the midst of sprawling black needlerush marshes. In accompaniment with the pine flatwoods, are coastal live oak woodlands situated

on prominent coastal cheniers and ancient beach ridges that straddle the coast line. The liveoak woodlands are comprised of native live and upland laurel oaks and contain an understory often dominated by saw palmetto. Most of the coastal upland habitat has been urbanized. Therefore it is likely that the maritime liveoak forest is one of the rarest communities found in Mississippi.

Soils of the coastal pinelands are deep, poorly drained, and slowly permeable. The landform is level to nearly level stream terraces and lowland flats of the Coastal Plain. They are grayish brown, have fine



MMNS-MDWFP



loamy textures, and are saturated during the winter and spring. Small depressions and some flat areas are ponded for several days during wet seasons. A seasonally high water table is within several inches of the soil surface from December through April. The wet conditions produce mottles of yellowish brown colors. The soils have very strongly acid to strongly acid reactions throughout their profile. The liveoak woodlands are found on deep sand ridges.

Slash pine along with the dominant understory species of this community can tolerate seasonally wet or saturated soils, including saturation due to periodic storm surges of brackish water. The community is delineated from other coastal slash pine woodlands by the dominance of saltmeadow cordgrass in its understory. Saltmeadow cordgrass relinquishes its dominance a short distance inland, but occasionally the species will persist several miles inland along creek channels and bayous.

Purple bluestem, button eryngo, switchgrass, Jamaica swamp sawgrass, and Gulf Coast swallow-wort are common associates. Southern bayberry, eastern baccharis and yaupon shrubs are commonly encountered in this community. The community is fire dependent and can become brushy and inaccessible to pedestrian traffic during long intervals between burns. Maritime woodlands, including maritime liveoak forests provide essential points for neotropical migrants staging their trans-gulf journey in the fall and recuperating upon their return in the spring.

Ecoregion - NGM

Location - Situated in highly urbanized coastal areas as well as the barrier islands, maritime woodlands have been significantly depleted by widespread development on the mainland. Areas of this subtype are

usually less than 100 acres but may extend in a narrow band along the shoreline for several miles. Some of the wettest areas near the Hancock County Marsh and within the Grand Bay National Estuarine Research Reserve remain intact and provide prime examples of this subtype. The liveoak woodlands have been extensively developed but a few pockets remain on some large private holdings.



Range of Maritime Woodlands

Size/Extent - Unknown

Condition/Threats - Extensive areas of maritime woodlands have been developed for other uses. Of the remaining areas, much of which is under public ownership, are in good condition. Woodlands found on private lands are vulnerable to commercial development or intensive forest management. Cogongrass is rampant across the range of this community and has invaded much of the road sides and woodlands in the vicinity. Its increased presence makes the maritime woodlands especially vulnerable to new infestations of this pandemic weed.

Conservation Status - This subtype is critically **imperiled** in the state due to its extreme rarity and because of the threats of urbanization and exotic weeds that contribute to further declines.

CWCS Rank Among Forest Types - 9th of 20





APPENDIX IV: CROSSWALK OF ECOLOGICAL COMMUNITY TYPES WITH FOREST COMMUNITY TYPES

The forest community types that are described herein were derived from those used in Mississippi's *Comprehensive Wildlife Conservation Strategy* (CWCS) which were condensed from the state's Natural Heritage Program (NHP) and NatureServe's classification of Ecological Systems – an international, standardized classification of terrestrial ecological systems. **Ecological systems represent recurring groups of biological communities that are found in similar physical environments and are influenced by similar dynamic ecological processes, such as fire or flooding.** They are intended to provide a classification unit that is readily mappable, often from remote imagery, and readily identifiable by conservation and resource managers in the field.

While scientists have made considerable progress classifying fine-grained ecological communities on the one hand and coarse-grained ecoregions on the other, land managers have identified a critical need for practical, mid-

scale ecological units, such as ecological systems, to inform conservation and resource management decisions. NatureServe and its natural heritage program members, with funding from The Nature Conservancy, have completed a working classification of terrestrial ecological systems in the coterminous United States, southern Alaska, and adjacent portions of Mexico and Canada. NatureServe represents an international network of biological inventories that not only collect and manage detailed local information on plants, animals, and ecosystems, but develop information products, data management tools, and conservation services to help meet local, national, and global conservation needs. The objective scientific information about species and ecosystems developed by NatureServe is used by all sectors of society - conservation groups, government agencies, corporations, academia, and the public - to make informed decisions about managing natural resources. Nearly 600 ecological systems have been classified and described by NatureServe and its natural heritage program members.

To enable the reader to cross reference the 20 forest community subtypes used in this document to those habitat types found in the Mississippi CWCS and the international standard of ecological systems used by the NHP and NatureServe, following is a crosswalk of the three classifications.



APPENDIX IV: CROSSWALK OF ECOLOGICAL COMMUNITY TYPES WITH FOREST COMMUNITY TYPES

Table 7: FLP Community Type Crosswalk with CWCS habitats and NHP ecological community types.

FLP FOREST COMMUNITY TYPE	CWCS* SUBTYPE CODE	FOREST SUBTYPE NAME	FOREST COMMUNITY TYPE NAME	NHP** ECOLOGICAL SYSTEM CODE	NHP ECOLOGICAL SYSTEM NAME
A.1	1.1	Dry Hardwood Forests	Dry-Mesic Upland Forests/Woodlands	CES203.492	East Gulf Coastal Plain Dry Chalk Bluff
A.1	1.1	Dry Hardwood Forests	Dry-Mesic Upland Forests/Woodlands	CES203.502	East Gulf Coastal Plain Limestone Forest
A.1	1.1	Dry Hardwood Forests	Dry-Mesic Upland Forests/Woodlands	CES203.483	East Gulf Coastal Plain Northern Dry Upland Hardwood Forest
A.1	1.1	Dry Hardwood Forests	Dry-Mesic Upland Forests/Woodlands	CES203.482	East Gulf Coastal Plain Northern Loess Plain Oak-Hickory Upland
A.1	1.1	Dry Hardwood Forests	Dry-Mesic Upland Forests/Woodlands	CES203.560	Southern Coastal Plain Dry Upland Hardwood Forest
A.2	1.2	Dry Longleaf Pine Forests	Dry-Mesic Upland Forests/Woodlands	CES203.496	East Gulf Coastal Plain Interior Upland Longleaf Pine Woodland
A.3	1.3	Dry-Mesic Hardwood Forests	Dry-Mesic Upland Forests/Woodlands	CES203.502	East Gulf Coastal Plain Limestone Forest
A.3	1.3	Dry-Mesic Hardwood Forests	Dry-Mesic Upland Forests/Woodlands	CES203.477	East Gulf Coastal Plain Northern Mesic Hardwood Slope Forest
A.4	1.4	Dry-Mesic Shortleaf/Loblolly Pine Forests	Dry-Mesic Upland Forests/Woodlands	CES203.506	East Gulf Coastal Plain Interior Shortleaf Pine-Oak Forest
A.4	1.4	Dry-Mesic Shortleaf/Loblolly Pine Forests	Dry-Mesic Upland Forests/Woodlands	CES203.557	East Gulf Coastal Plain Southern Loblolly-Hardwood Flatwoods
B.1	2.1	Northeast Prairie/Cedar Glades	Old Fields, Prairies, Cedar Glades and Pine Plantations	CES203.478	East Gulf Coastal Plain Black Belt Calcareous Prairie and Woodland
B.2	2.4	Pine Plantations	Old Fields, Prairies, Cedar Glades and Pine Plantations	NOEQUIV	NO EQUIVALENT
B.3	2.5	Old Fields and Young Hardwoods (Shrublands)	Old Fields, Prairies, Cedar Glades and Pine Plantations	NOEQUIV	NO EQUIVALENT
C.1	3.1	Beech/Magnolia Forests	Mesic Upland Forests	CES203.556	East Gulf Coastal Plain Southern Loess Bluff Forest
C.1	3.1	Beech/Magnolia Forests	Mesic Upland Forests	CES203.476	East Gulf Coastal Plain Southern Mesic Slope Forest
C.2	3.2	Mesic Longleaf Pine Savanna/ Forests	Mesic Upland Forests	CES203.496	East Gulf Coastal Plain Interior Upland Longleaf Pine Woodland



APPENDIX IV: CROSSWALK OF ECOLOGICAL COMMUNITY TYPES WITH FOREST COMMUNITY TYPES

FLP FOREST COMMUNITY TYPE	CWCS* SUBTYPE CODE	FOREST SUBTYPE NAME	FOREST COMMUNITY TYPE NAME	NHP** ECOLOGICAL SYSTEM CODE	NHP ECOLOGICAL SYSTEM NAME
C.3	3.3	Mesic Longleaf Pine Savanna/Forests	Mesic Upland Forests	CES203.481	East Gulf Coastal Plain Northern Loess Bluff Forest
C.3	3.3	Loess Hardwood Forests	Mesic Upland Forests	CES203.556	East Gulf Coastal Plain Southern Loess Bluff Forests
C.4	3.4	Lower Slope/High Terrace Hardwood Forests	Mesic Upland Forests	CES203.196	Mississippi River High Floodplain (Bottomland) Forests
C.4	3.4	Lower Slope/High Terrace Hardwood Forests	Mesic Upland Forests	CES203.501	Southern Coastal Plain Hydric Hammock
D.1	4.1	Bottomland Hardwood Forests	Bottomland Hardwood Forests	CES203.489	East Gulf Coastal Plain Large River Floodplain Forest
D.1	4.1	Bottomland Hardwood Forests	Bottomland Hardwood Forests	CES203.559	East Gulf Coastal Plain Small Stream and River Floodplain Forest
D.1	4.1	Bottomland Hardwood Forests	Bottomland Hardwood Forests	CES203.196	Mississippi River High Floodplain (Bottomland) Forest
D.1	4.1	Bottomland Hardwood Forests	Bottomland Hardwood Forests	CES203.195	Mississippi River Low Floodplain (Bottomland) Forest
E.1	5.1	Cottonwood/Black Willow/River Birch Woodlands	Riverfront Forests/Herblands/Sandbars	CES203.190	Mississippi River Riparian Forest
F.1	6.1	Wet Pine Savannas	Wet Pine Savannas/Flatwoods	CES203.192	East Gulf Coastal Plain Treeless Savanna and Wet Prairie
F.2	6.2	Slash Pine Flatwoods	Wet Pine Savannas/Flatwoods	CES203.192	East Gulf Coastal Plain Treeless Savanna and Wet Prairie
G.1	7.1	Hardwood Seeps	Spring Seeps	CES203.554	East Gulf Coastal Plain Northern Seepage Swamp
G.2	7.2	Pine Seeps	Spring Seeps	NOEQUIV	NO EQUIVALENT
H.1	10.1	Bald Cypress/Gum Swamp Forests	Swamp Forests	CES203.558	East Gulf Coastal Plain Northern Depression Pondshore
H.1	10.1	Bald Cypress/Gum Swamp Forests	Swamp Forests	CES203.504	East Gulf Coastal Plain Southern Depression Pondshore
H.1	10.1	Bald Cypress/Gum Swamp Forests	Swamp Forests	CES203.490	Lower Mississippi River Bottomland Depression
H.2	10.2	Small Stream Swamp Forests	Swamp Forests	CES203.559	East Gulf Coastal Plain Small Stream and River Floodplain Forest
H.2	10.2	Small Stream Swamp Forests	Swamp Forests	CES203.493	Southern Coastal Plain Blackwater River Floodplain Forest



APPENDIX IV: CROSSWALK OF ECOLOGICAL COMMUNITY TYPES WITH FOREST COMMUNITY TYPES

FLP FOREST COMMUNITY TYPE	CWCS* SUBTYPE CODE	FOREST SUBTYPE NAME	FOREST COMMUNITY TYPE NAME	NHP** ECOLOGICAL SYSTEM CODE	NHP ECOLOGICAL SYSTEM NAME
H.2	10.2	Small Stream Swamp Forests	Swamp Forests	CES203.505	Southern Coastal Plain Seepage Swamp and Baygall
I.1	13.7	Maritime Woodlands	Upland Maritime and Estuarine Fringe Habitats	CES203.375	East Gulf Coastal Plain Near-Coast Pine Flatwoods
I.1	13.7	Maritime Woodlands	Upland Maritime and Estuarine Fringe Habitats	CES203.513	Mississippi Delta Maritime Forest
I.1	13.7	Maritime Woodlands	Upland Maritime and Estuarine Fringe Habitats	CES203.494	Southern Coastal Plain Oak Dome and Hammock

* Comprehensive Wildlife Conservation Strategy

** Natural Heritage Program





APPENDIX V: MISSISSIPPI WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

The national *Forest Legacy Program Implementation Guidelines* require states seeking inclusion in the FLP document address fish and wildlife habitat on public and private lands including threatened and endangered species and other ecological values.

Table 8 includes a list of wildlife species of concern in Mississippi that depend on forests for some portion of their life history, though they differ greatly in their habitat requirements. This information was taken directly from Mississippi's 2005 *CWCS* which identified 297 wildlife species of concern (except gastropods and insects) in the state and the habitats on which they depend for survival. This list separates the animals by group and forest subtype and also indicates the state and global heritage ranks of each species and its status as a state or federally protected species. The reader and Mississippi FLP applicants may find this information helpful for

reference and in discussing potential habitat for wildlife species of concern on their parcel.

The following is an explanation of the acronyms, symbols and ranking criteria used in the table for the species' global and state status and indicates if the species are listed as a state or federally threatened or endangered species.

HERITAGE RANKS

The Mississippi NHP uses the heritage ranking system developed by The Nature Conservancy. Each species is assigned two ranks; one representing its range wide or **global status (GRANK)**, and one representing its status in the **state (SRANK)**.

STATE RANK (SRANK)

- | | |
|----|---|
| S1 | Critically imperiled in Mississippi because of extreme rarity or because of some factor(s) making it vulnerable to extirpation. |
| S2 | Imperiled in Mississippi because of rarity or because of some factor(s) making it vulnerable to extirpation. |
| S3 | Rare or uncommon in Mississippi |
| S4 | Widespread, abundant, and apparently secure in the state, but with cause for long-term concern |
| S5 | Demonstrably widespread, abundant, and secure in the state. |



- SU Possibly in peril in Mississippi but status uncertain; need more information. May also be represented by S?.
- S? Unranked: Element is not yet ranked in the state.
- SX Element is believed to be extirpated from the state.
- SZ Not of practical conservation concern in the state, because there are no established populations, although the taxon is native.
- SP Potential: Element potentially occurs in the state but no occurrences reported.

BREEDING STATUS: (Applicable to migratory species, mainly birds, but also includes sea turtles, some fish, and some insects).

B = Breeding Status

N = Non-breeding Status

QUALIFIERS:

? = Inexact

C = Captive or Cultivated only

GLOBAL RANK (GRANK)

Criteria follow those of SRANK except for species having Several subspecies. In these cases, a fourth subrank, made up of the letter "T" plus a number or letter (1,2,3,4,5,H,U,X,?), is added to the GRANK.

STATE STATUS

Seventy-six animals have been designated as state endangered through the Mississippi State Law, the Nongame and Endangered Species Conservation Act of 1974. Plants receive no formal legal protection by state law in Mississippi other than that provided for in the trespass laws.

FEDERAL STATUS

The following is a guide to acronyms taken from the *Federal Register*.

LE Endangered

A species which is in danger of extinction throughout all or a significant portion of its range.

LT Threatened

A species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

C Candidate Species

Species for which the USFWS currently has substantial information supporting the biological appropriateness of proposing to list as endangered or threatened. Proposed rules have not yet been issued because they have been precluded at present by other listing activity. Development and publication of proposed rules is anticipated, however, and the USFWS encourages federal agencies and other appropriate parties to give considerations to such taxa in environmental planning.



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

Table 8: MS Species of Greatest Conservation need by forest community type.

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Hylocichla mustelina</i>	Wood Thrush	S5B,SZN	G5		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Piranga olivacea</i>	Scarlet Tanager	S2?B,SZN	G5		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Thryomanes bewickii</i>	Bewick's Wren	S2B,S3N	G5	LE	
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Dendroica cerulea</i>	Cerulean Warbler	S2B,SZN	G4		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Caprimulgus carolinensis</i>	Chuck-Will's-Widow	S4B	G5		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Dendroica discolor</i>	Prairie Warbler	S5B,SZN	G5		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Helmitheros vermivorus</i>	Worm-Eating Warbler	S3B,SZN	G5		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Myotis sodalis</i>	Indiana Or Social Myotis	SAN	G2	LE	LE
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Myotis septentrionalis</i>	Northern Myotis	S2?	G4		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Lasionycteris noctivagans</i>	Silver-Haired Bat	SA?	G5		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Peromyscus polionotus</i>	Oldfield Mouse	S2S3	G5		(PS)
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Ursus americanus</i>	Black Bear	S1	G5	LE	(PS)



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Ursus americanus luteolus</i>	Louisiana Black Bear	S1	G5T2	LE	LT
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Lasiurus cinereus</i>	Hoary Bat	S3	G5		(PS)
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Lasiurus intermedius</i>	Northern Yellow Bat	S2?	G4G5		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Myotis lucifugus</i>	Little Brown Myotis	S3	G5		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Spilogale putorius</i>	Eastern Spotted Skunk	S2?	G5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Gopherus polyphemus</i>	Gopher Tortoise	S2	G3	LE	PS:LT
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Pituophis melanoleucus lodingi</i>	Black Pine Snake	S2	G4T3	LE	C
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Pituophis melanoleucus melanoleucus</i>	Northern Pine Snake	SR	G4T4		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Micrurus fulvius</i>	Eastern Coral Snake	S3S4	G5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Crotalus adamanteus</i>	Eastern Diamondback Rattlesnake	S3S4	G4		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Ophisaurus attenuatus</i>	Slender Glass Lizard	S2S3	G5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Masticophis flagellum</i>	Eastern Coachwhip	S3S4	G5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Lampropeltis calligaster calligaster</i>	Prairie Kingsnake	S3S4	G5T5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.1	Dry Hardwood Forests	<i>Lampropeltis calligaster rhombomaculata</i>	Mole Kingsnake	S2	G5T5		
Amphibians	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Pseudacris ornata</i>	Ornate Chorus Frog	S1S2	G5		



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Amphibians	A	Dry-Mesic Upland Forests/Woodlands	A.2	Dry Longleaf Pine Forests	<i>Rana sevosia</i>	Mississippi Gopher Frog	S1	G1	LE	LE
Birds	A	Dry-Mesic Upland Forests/Woodlands	A.2	Dry Longleaf Pine Forests	<i>Falco sparverius paulus</i>	Southeastern American Kestrel	S3B,SZN	G5T4		
Birds	A	Dry-Mesic Upland Forests/Woodlands	A.2	Dry Longleaf Pine Forests	<i>Colinus virginianus</i>	Northern Bobwhite	S3S4	G5		(PS)
Birds	A	Dry-Mesic Upland Forests/Woodlands	A.2	Dry Longleaf Pine Forests	<i>Picoides borealis</i>	Red-Cockaded Woodpecker	S1	G3	LE	LE
Birds	A	Dry-Mesic Upland Forests/Woodlands	A.2	Dry Longleaf Pine Forests	<i>Sitta pusilla</i>	Brown-Headed Nuthatch	S4B	G5		
Birds	A	Dry-Mesic Upland Forests/Woodlands	A.2	Dry Longleaf Pine Forests	<i>Dendroica discolor</i>	Prairie Warbler	S5B,SZN	G5		
Birds	A	Dry-Mesic Upland Forests/Woodlands	A.2	Dry Longleaf Pine Forests	<i>Aimophila aestivalis</i>	Bachman's Sparrow	S3B, S3S4N	G3		
Birds	A	Dry-Mesic Upland Forests/Woodlands	A.2	Dry Longleaf Pine Forests	<i>Caprimulgus carolinensis</i>	Chuck-Will's-Widow	S4B	G5		
Birds	A	Dry-Mesic Upland Forests/Woodlands	A.2	Dry Longleaf Pine Forests	<i>Columbina passerina</i>	Common Ground-Dove	S1S2	G5		
Birds	A	Dry-Mesic Upland Forests/Woodlands	A.2	Dry Longleaf Pine Forests	<i>Ammodramus savannarum</i>	Grasshopper Sparrow	S3B,S3N	G5		(PS)
Birds	A	Dry-Mesic Upland Forests/Woodlands	A.2	Dry Longleaf Pine Forests	<i>Campephilus principalis</i>	Ivory-Billed Woodpecker	SX	GH	LE	LE
Birds	A	Dry-Mesic Upland Forests/Woodlands	A.2	Dry Longleaf Pine Forests	<i>Ammodramus leconteii</i>	Le Conte's Sparrow	S3N	G4		
Birds	A	Dry-Mesic Upland Forests/Woodlands	A.2	Dry Longleaf Pine Forests	<i>Melanerpes erythrocephalus</i>	Red-Headed Woodpecker	S4S5	G5		
Mammals	A	Dry-Mesic Upland Forests/Woodlands	A.2	Dry Longleaf Pine Forests	<i>Ursus americanus luteolus</i>	Louisiana Black Bear	S1	G5T2	LE	LT
Mammals	A	Dry-Mesic Upland Forests/Woodlands	A.2	Dry Longleaf Pine Forests	<i>Lasiurus cinereus</i>	Hoary Bat	S3	G5		(PS)



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ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Lasiurus intermedius</i>	Northern Yellow Bat	S2?	G4G5		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Myotis septentrionalis</i>	Northern Myotis	S2?	G4		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Myotis lucifugus</i>	Little Brown Myotis	S3	G5		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Lasionycteris noctivagans</i>	Silver-Haired Bat	SA?	G5		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Ursus americanus</i>	Black Bear	S1	G5	LE	(PS)
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Spilogale putorius</i>	Eastern Spotted Skunk	S2?	G5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Gopherus polyphemus</i>	Gopher Tortoise	S2	G3	LE	PS:LT
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Ophisaurus mimicus</i>	Mimic Glass Lizard	S1?	G3		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Drymarchon couperi</i>	Eastern Indigo Snake	SH	G3	LE	LT
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Heterodon simus</i>	Southern Hognose Snake	SX	G2	LE	
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Pituophis melanoleucus lodingi</i>	Black Pine Snake	S2	G4T3	LE	C
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Micrurus fulvius</i>	Eastern Coral Snake	S3S4	G5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Crotalus adamanteus</i>	Eastern Diamondback Rattlesnake	S3S4	G4		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Ophisaurus attenuatus</i>	Slender Glass Lizard	S2S3	G5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Masticophis flagellum</i>	Eastern Coachwhip	S3S4	G5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.2	Dry Longleaf Pine Forests	<i>Lampropeltis calligaster rhombomaculata</i>	Mole Kingsnake	S2	G5T5		



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ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Hylocichla mustelina</i>	Wood Thrush	S5B,SZN	G5		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Dendroica cerulea</i>	Cerulean Warbler	S2B,SZN	G4		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Helminthos vermivorus</i>	Worm-Eating Warbler	S3B,SZN	G5		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Oporornis formosus</i>	Kentucky Warbler	S5B,SZN	G5		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Piranga olivacea</i>	Scarlet Tanager	S2?B,SZN	G5		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Scolopax minor</i>	American Woodcock	S?	G5		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Thryomanes bewickii</i>	Bewick's Wren	S2B,S3N	G5	LE	
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Caprimulgus carolinensis</i>	Chuck-Will's-Widow	S4B	G5		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Myotis grisescens</i>	Gray Myotis	S1	G3	LE	LE
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Myotis sodalis</i>	Indiana Or Social Myotis	SAN	G2	LE	LE
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Myotis septentrionalis</i>	Northern Myotis	S2?	G4		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Lasiorycteris noctivagans</i>	Silver-Haired Bat	SA?	G5		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Ursus americanus</i>	Black Bear	S1	G5	LE	(PS)
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Ursus americanus luteolus</i>	Louisiana Black Bear	S1	G5T2	LE	LT
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Lasiurus cinereus</i>	Hoary Bat	S3	G5		(PS)
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Lasiurus intermedius</i>	Northern Yellow Bat	S2?	G4G5		



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Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Myotis lucifugus</i>	Little Brown Myotis	S3	G5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Drymarchon couperi</i>	Eastern Indigo Snake	SH	G3	LE	LT
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Lampropeltis triangulum sypila</i>	Red Milk Snake	S3	G5T5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Eumeces anthracinus phувialis</i>	Southern Coal Skink	S2S3	G5T5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Micrurus fulvius</i>	Eastern Coral Snake	S3S4	G5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Ophisaurus attenuatus</i>	Slender Glass Lizard	S2S3	G5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Lampropeltis getula nigra</i>	Black Kingsnake	S3	G5T5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Masticophis flagellum</i>	Eastern Coachwhip	S3S4	G5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Lampropeltis calligaster calligaster</i>	Prairie Kingsnake	S3S4	G5T5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.3	Dry-Mesic Hardwood Forests	<i>Lampropeltis calligaster rhombomaculata</i>	Mole Kingsnake	S2	G5T5		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/Loblolly Pine Forests	<i>Picoides borealis</i>	Red-Cockaded Woodpecker	S1	G3	LE	LE
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/Loblolly Pine Forests	<i>Sitta pusilla</i>	Brown-Headed Nuthatch	S4B	G5		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/Loblolly Pine Forests	<i>Aimophila aestivalis</i>	Bachman's Sparrow	S3B,S3S4N	G3		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/Loblolly Pine Forests	<i>Caprimulgus carolinensis</i>	Chuck-Will's-Widow	S4B	G5		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/Loblolly Pine Forests	<i>Colinus virginianus</i>	Northern Bobwhite	S3S4	G5		(PS)



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Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/ Loblolly Pine Forests	<i>Dendroica discolor</i>	Prairie Warbler	S5B,SZN	G5		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/ Loblolly Pine Forests	<i>Melanerpes erythrocephalus</i>	Red-Headed Woodpecker	S4S5	G5		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/ Loblolly Pine Forests	<i>Falco sparverius paulus</i>	Southeastern American Kestrel	S3B,SZN	G5T4		
Birds	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/ Loblolly Pine Forests	<i>Scolopax minor</i>	American Woodcock	S?	G5		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/ Loblolly Pine Forests	<i>Ursus americanus luteolus</i>	Louisiana Black Bear	S1	G5T2	LE	LT
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/ Loblolly Pine Forests	<i>Lasiurus cinereus</i>	Hoary Bat	S3	G5		(PS)
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/ Loblolly Pine Forests	<i>Lasiurus intermedius</i>	Northern Yellow Bat	S2?	G4G5		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/ Loblolly Pine Forests	<i>Myotis septentrionalis</i>	Northern Myotis	S2?	G4		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/ Loblolly Pine Forests	<i>Myotis lucifugus</i>	Little Brown Myotis	S3	G5		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/ Loblolly Pine Forests	<i>Lasionycteris noctivagans</i>	Silver-Haired Bat	SA?	G5		
Mammals	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/ Loblolly Pine Forests	<i>Spilogale putorius</i>	Eastern Spotted Skunk	S2?	G5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/ Loblolly Pine Forests	<i>Pituophis melanoleucus melanoleucus</i>	Northern Pine Snake	SR	G4T4		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/ Loblolly Pine Forests	<i>Ophisaurus attenuatus</i>	Slender Glass Lizard	S2S3	G5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/ Loblolly Pine Forests	<i>Lampropeltis getula nigra</i>	Black Kingsnake	S3	G5T5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/ Loblolly Pine Forests	<i>Masticophis flagellum</i>	Eastern Coachwhip	S3S4	G5		
Reptiles	A	Dry-Mesic Upland Forests/ Woodlands	A.4	Dry-Mesic Shortleaf/ Loblolly Pine Forests	<i>Lampropeltis calligaster rhombomaculata</i>	Mole Kingsnake	S2	G5T5		



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Reptiles	A	Dry-Mesic Upland Forests/Woodlands	A.4	Dry-Mesic Shortleaf/Loblolly Pine Forests	<i>Gopherus polyphemus</i>	Gopher Tortoise	S2	G3	LE	PS:LT
Reptiles	A	Dry-Mesic Upland Forests/Woodlands	A.4	Dry-Mesic Shortleaf/Loblolly Pine Forests	<i>Pituophis melanoleucus lodingi</i>	Black Pine Snake	S2	G4T3	LE	C
Reptiles	A	Dry-Mesic Upland Forests/Woodlands	A.4	Dry-Mesic Shortleaf/Loblolly Pine Forests	<i>Crotalus adamanteus</i>	Eastern Diamondback Rattlesnake	S3S4	G4		
Amphibians	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Rana areolata</i>	Crawfish Frog	S3	G4		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Ammodramus savannarum</i>	Grasshopper Sparrow	S3B,S3N	G5		(PS)
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Scolopax minor</i>	American Woodcock	S?	G5		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Aimophila aestivalis</i>	Bachman's Sparrow	S3B,S3S4N	G3		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Thryomanes bewickii</i>	Bewick's Wren	S2B,S3N	G5	LE	
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Caprimulgus carolinensis</i>	Chuck-Will's-Widow	S4B	G5		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Tyto alba</i>	Common Barn-Owl	S3	G5		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Columbina passerina</i>	Common Ground-Dove	S1S2	G5		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Ammodramus leconteii</i>	Le Conte's Sparrow	S3N	G4		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Lanius ludovicianus</i>	Loggerhead Shrike	S4	G4		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Colinus virginianus</i>	Northern Bobwhite	S3S4	G5		(PS)
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Dendroica discolor</i>	Prairie Warbler	S5B,SZN	G5		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Asio flammeus</i>	Short-Eared Owl	S3N	G5		



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Crustaceans	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Procambarus pogum</i>	Bearded Red Crayfish	S1	G1		
Crustaceans	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Procambarus hagenianus vesticeps</i>	A Crayfish	S3S4	G4G5T3		
Mammals	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Lasiurus cinereus</i>	Hoary Bat	S3	G5		(PS)
Mammals	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Myotis lucifugus</i>	Little Brown Myotis	S3	G5		
Mammals	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Spilogale putorius</i>	Eastern Spotted Skunk	S2?	G5		
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Ophisaurus attenuatus</i>	Slender Glass Lizard	S2S3	G5		
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Masticophis flagellum</i>	Eastern Coachwhip	S3S4	G5		
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Lampropeltis calligaster calligaster</i>	Prairie Kingsnake	S3S4	G5T5		
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.1	Northeast Prairie/Cedar Glades	<i>Lampropeltis calligaster rhombomaculata</i>	Mole Kingsnake	S2	G5T5		
Amphibians	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Rana areolata</i>	Crawfish Frog	S3	G4		
Amphibians	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Bufo nebulifer</i>	Gulf Coast Toad	S3	G5		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Colinus virginianus</i>	Northern Bobwhite	S3S4	G5		(PS)
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Scolopax minor</i>	American Woodcock	S?	G5		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Aimophila aestivalis</i>	Bachman's Sparrow	S3B,S3S4N	G3		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Dendroica discolor</i>	Prairie Warbler	S5B,SZN	G5		



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Hylocichla mustelina</i>	Wood Thrush	S5B,SZN	G5		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Oporornis formosus</i>	Kentucky Warbler	S5B,SZN	G5		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Limothlypis swainsonii</i>	Swainson's Warbler	S3S4N,SZB	G4		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Caprimulgus carolinensis</i>	Chuck-Will's-Widow	S4B	G5		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Sitta pusilla</i>	Brown-Headed Nuthatch	S4B	G5		
Mammals	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Myotis lucifugus</i>	Little Brown Myotis	S3	G5		
Mammals	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Zapus hudsonius</i>	Meadow Jumping Mouse	S1	G5		(PS)
Mammals	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Spilogale putorius</i>	Eastern Spotted Skunk	S2?	G5		
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Eumeces anthracinus phrialis</i>	Southern Coal Skink	S2S3	G5T5		
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Lampropeltis calligaster calligaster</i>	Prairie Kingsnake	S3S4	G5T5		
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Lampropeltis calligaster rhombomaculata</i>	Mole Kingsnake	S2	G5T5		
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Gopherus polyphemus</i>	Gopher Tortoise	S2	G3	LE	PS:LT
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Lampropeltis triangulum sypila</i>	Red Milk Snake	S3	G5T5		
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Ophisaurus attenuatus</i>	Slender Glass Lizard	S2S3	G5		
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Lampropeltis getula nigra</i>	Black Kingsnake	S3	G5T5		
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Masticophis flagellum</i>	Eastern Coachwhip	S3S4	G5		



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK	GLOBAL RANK	FEDERAL STATUS	STATE STATUS
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Drymarchon couperi</i>	Eastern Indigo Snake	SH	G3	LE	LT
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.2	Pine Plantations	<i>Crotalus adamantens</i>	Eastern Diamondback	S3S4	G4		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Dendroica discolor</i>	Prairie Warbler	S5B,SZN	G5		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Aimophila aestivalis</i>	Bachman's Sparrow	S3B,S3S4N	G3		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Colinus virginianus</i>	Northern Bobwhite	S3S4	G5		(PS)
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Scolopax minor</i>	American Woodcock	S?	G5		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Falco sparverius paulus</i>	Southeastern American Kestrel	S3B,SZN	G5T4		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Caprimulgus carolinensis</i>	Chuck-Will's-Widow	S4B	G5		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Lanius ludovicianus</i>	Loggerhead Shrike	S4	G4		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Passerina ciris</i>	Painted Bunting	S3S4B,SZN	G5		
Birds	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Thryomanes bewickii</i>	Bewick's Wren	S2B,S3N	G5	LE	
Mammals	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Spilogale putorius</i>	Eastern Spotted Skunk	S2?	G5		
Mammals	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Peromyscus polionotus</i>	Oldfield Mouse	S2S3	G5		(PS)
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Gopherus polyphemus</i>	Gopher Tortoise	S2	G3	LE	PS:LT
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Ophisaurus attenuatus</i>	Slender Glass Lizard	S2S3	G5		
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Lampropeltis getula nigra</i>	Black Kingsnake	S3	G5T5		



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Masticophis flagellum</i>	Eastern Coachwhip	S3S4	G5		
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Drymarchon couperi</i>	Eastern Indigo Snake	SH	G3	LE	LT
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Lampropeltis calligaster calligaster</i>	Prairie Kingsnake	S3S4	G5T5		
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Lampropeltis calligaster rhombomaculata</i>	Mole Kingsnake	S2	G5T5		
Reptiles	B	Old Fields, Prairies/Cedar Glades and Pine Plantations	B.3	Old Fields and Young Hardwoods (Shrublands)	<i>Crotalus adamanteus</i>	Eastern Diamondback Rattlesnake	S3S4	G4		
Amphibians	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Plethodon websteri</i>	Webster's Salamander	S3	G3		
Birds	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Hylocichla mustelina</i>	Wood Thrush	S5B,SZN	G5		
Birds	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Oporornis formosus</i>	Kentucky Warbler	S5B,SZN	G5		
Birds	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Piranga olivacea</i>	Scarlet Tanager	S2?B,SZN	G5		
Birds	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Helminthos vermivorus</i>	Worm-Eating Warbler	S3B,SZN	G5		
Birds	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Seiurus motacilla</i>	Louisiana Waterthrush	S3B,SZN	G5		
Mammals	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Myotis austroriparius</i>	Southeastern Myotis	S1S2	G3G4		
Mammals	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Myotis grisescens</i>	Gray Myotis	S1	G3	LE	LE
Mammals	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Myotis sodalis</i>	Indiana Or Social Myotis	SAN	G2	LE	LE
Mammals	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-Eared Bat	S3	G3G4		
Mammals	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Lasiurus cinereus</i>	Hoary Bat	S3	G5		(PS)



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Mammals	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Lasiurus intermedius</i>	Northern Yellow Bat	S2?	G4G5		
Mammals	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Myotis septentrionalis</i>	Northern Myotis	S2?	G4		
Mammals	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Myotis lucifugus</i>	Little Brown Myotis	S3	G5		
Mammals	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Lasionycteris noctivagans</i>	Silver-Haired Bat	SA?	G5		
Mammals	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Puma concolor coryi</i>	Florida Panther	SX	G5T1	LE	LE
Mammals	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Ursus americanus</i>	Black Bear	S1	G5	LE	(PS)
Mammals	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Ursus americanus luteolus</i>	Louisiana Black Bear	S1	G5T2	LE	LT
Reptiles	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Eumeces anthracinus pluvialis</i>	Southern Coal Skink	S2S3	G5T5		
Reptiles	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Lampropeltis triangulum sypila</i>	Red Milk Snake	S3	G5T5		
Reptiles	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Ophisaurus attenuatus</i>	Slender Glass Lizard	S2S3	G5		
Reptiles	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Lampropeltis getula nigra</i>	Black Kingsnake	S3	G5T5		
Reptiles	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Lampropeltis calligaster calligaster</i>	Prairie Kingsnake	S3S4	G5T5		
Reptiles	C	Mesic Upland Forests	C.1	Beech/Magnolia Forests	<i>Lampropeltis calligaster rhombomaculata</i>	Mole Kingsnake	S2	G5T5		
Amphibians	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Pseudacris ornata</i>	Ornate Chorus Frog	S1S2	G5		
Amphibians	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Rana sevosa</i>	Mississippi Gopher Frog	S1	G1	LE	LE
Birds	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Picoides borealis</i>	Red-Cockaded Woodpecker	S1	G3	LE	LE
Birds	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Sitta pusilla</i>	Brown-Headed Nuthatch	S4B	G5		



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ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Birds	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Ammodramus henslowii</i>	Henslow's Sparrow	S3N	G4		
Birds	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Scolopax minor</i>	American Woodcock	S?	G5		
Birds	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Ammodramus savannarum</i>	Grasshopper Sparrow	S3B,S3N	G5		(PS)
Birds	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Colinus virginianus</i>	Northern Bobwhite	S3S4	G5		(PS)
Birds	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Melanerpes erythrocephalus</i>	Red-Headed Woodpecker	S4S5	G5		
Birds	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Falco sparverius paulus</i>	Southeastern American Kestrel	S3B,SZN	G5T4		
Birds	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Coturnicops noveboracensis</i>	Yellow Rail	S2N	G4		
Mammals	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Lasiurus intermedius</i>	Northern Yellow Bat	S2?	G4G5		
Mammals	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Lasiurus cinereus</i>	Hoary Bat	S3	G5		(PS)
Mammals	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Myotis sodalis</i>	Indiana Or Social Myotis	SAN	G2	LE	LE
Mammals	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Myotis grisescens</i>	Gray Myotis	S1	G3	LE	LE
Mammals	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Myotis septentrionalis</i>	Northern Myotis	S2?	G4		
Mammals	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Myotis lucifugus</i>	Little Brown Myotis	S3	G5		
Mammals	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Lasionycteris noctivagans</i>	Silver-Haired Bat	SA?	G5		
Mammals	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Puma concolor coryi</i>	Florida Panther	SX	G5T1	LE	LE
Mammals	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Ursus americanus</i>	Black Bear	S1	G5	LE	(PS)



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Mammals	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Ursus americanus luteolus</i>	Louisiana Black Bear	S1	G5T2	LE	LT
Reptiles	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Crotalus adamanteus</i>	Eastern Diamondback Rattlesnake	S3S4	G4		
Reptiles	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Micrurus fulvius</i>	Eastern Coral Snake	S3S4	G5		
Reptiles	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Ophisaurus attenuatus</i>	Slender Glass Lizard	S2S3	G5		
Reptiles	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Masticophis flagellum</i>	Eastern Coachwhip	S3S4	G5		
Reptiles	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Drymarchon couperi</i>	Eastern Indigo Snake	SH	G3	LE	LT
Reptiles	C	Mesic Upland Forests	C.2	Mesic Longleaf Pine Savanna/Forests	<i>Lampropeltis calligaster rhombomaculata</i>	Mole Kingsnake	S2	G5T5		
Amphibians	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Plethodon websteri</i>	Webster's Salamander	S3	G3		
Birds	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Dendroica cerulea</i>	Cerulean Warbler	S2B,SZN	G4		
Birds	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Helminthos vermivorus</i>	Worm-Eating Warbler	S3B,SZN	G5		
Birds	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Oporornis formosus</i>	Kentucky Warbler	S5B,SZN	G5		
Birds	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Campephilus principalis</i>	Ivory-Billed Woodpecker	SX	GH	LE	LE
Birds	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Seiurus motacilla</i>	Louisiana Waterthrush	S3B,SZN	G5		
Birds	C	Mesic Upland Forests	C.3	Loess Hardwood Forests		Migrant Songbirds				
Birds	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Piranga olivacea</i>	Scarlet Tanager	S2?B,SZN	G5		
Birds	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Limnithlypis swainsonii</i>	Swainson's Warbler	S3S4N,SZB	G4		



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Birds	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Hylocichla mustelina</i>	Wood Thrush	S5B,SZN	G5		
Fishes	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Phoxinus erythrogaster</i>	Southern Redbelly Dace	S2	G5	LE	
Mammals	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Myotis lucifugus</i>	Little Brown Myotis	S3	G5		
Mammals	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Myotis sodalis</i>	Indiana Or Social Myotis	SAN	G2	LE	LE
Mammals	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Lasionycteris noctivagans</i>	Silver-Haired Bat	SA?	G5		
Mammals	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Ursus americanus</i>	Black Bear	S1	G5	LE	(PS)
Mammals	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Ursus americanus luteolus</i>	Louisiana Black Bear	S1	G5T2	LE	LT
Mammals	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Myotis austroriparius</i>	Southeastern Myotis	S1S2	G3G4		
Mammals	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Lasiurus cinereus</i>	Hoary Bat	S3	G5		(PS)
Mammals	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Myotis grisescens</i>	Gray Myotis	S1	G3	LE	LE
Mammals	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Lasiurus intermedius</i>	Northern Yellow Bat	S2?	G4G5		
Mammals	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Myotis septentrionalis</i>	Northern Myotis	S2?	G4		
Mammals	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Puma concolor coryi</i>	Florida Panther	SX	G5T1	LE	LE
Reptiles	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Lampropeltis triangulum sypila</i>	Red Milk Snake	S3	G5T5		
Reptiles	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Lampropeltis calligaster calligaster</i>	Prairie Kingsnake	S3S4	G5T5		
Reptiles	C	Mesic Upland Forests	C.3	Loess Hardwood Forests	<i>Lampropeltis calligaster rhombomaculata</i>	Mole Kingsnake	S2	G5T5		



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Amphibians	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Plethodon websteri</i>	Webster's Salamander	S3	G3		
Amphibians	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Rana areolata</i>	Crawfish Frog	S3	G4		
Birds	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Dendroica cerulea</i>	Cerulean Warbler	S2B,SZN	G4		
Birds	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Limnothlypis swainsonii</i>	Swainson's Warbler	S3S4N, SZB	G4		
Birds	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Oporornis formosus</i>	Kentucky Warbler	S5B,SZN	G5		
Birds	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Scolopax minor</i>	American Woodcock	S?	G5		
Birds	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Vermivora bachmanii</i>	Bachman's Warbler	SXB	GH	LE	LE
Birds	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Campephilus principalis</i>	Ivory-Billed Woodpecker	SX	GH	LE	LE
Birds	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Seiurus motacilla</i>	Louisiana Waterthrush	S3B,SZN	G5		
Birds	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests		Migrant Songbirds				
Birds	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Protonotaria citrea</i>	Prothonotary Warbler	S5B,SZN	G5		
Birds	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Melanerpes erythrocephalus</i>	Red-Headed Woodpecker	S4S5	G5		
Birds	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Euphagus carolinus</i>	Rusty Blackbird	S2	G5		
Birds	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Hylocichla mustelina</i>	Wood Thrush	S5B,SZN	G5		
Fishes	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Phoxinus erythrogaster</i>	Southern Redbelly Dace	S2	G5	LE	



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Mammals	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Myotis septentrionalis</i>	Northern Myotis	S2?	G4		
Mammals	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Myotis austroriparius</i>	Southeastern Myotis	S1S2	G3G4		
Mammals	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Lasiurus cinereus</i>	Hoary Bat	S3	G5		(PS)
Mammals	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Myotis sodalis</i>	Indiana Or Social Myotis	SAN	G2	LE	LE
Mammals	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Myotis grisescens</i>	Gray Myotis	S1	G3	LE	LE
Mammals	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Lasiurus intermedius</i>	Northern Yellow Bat	S2?	G4G5		
Mammals	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Myotis lucifugus</i>	Little Brown Myotis	S3	G5		
Mammals	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Lasionycteris noctivagans</i>	Silver-Haired Bat	SA?	G5		
Mammals	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Puma concolor coryi</i>	Florida Panther	SX	G5T1	LE	LE
Mammals	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Ursus americanus</i>	Black Bear	S1	G5	LE	(PS)
Mammals	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Ursus americanus luteolus</i>	Louisiana Black Bear	S1	G5T2	LE	LT
Reptiles	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Lampropeltis triangulum sypila</i>	Red Milk Snake	S3	G5T5		
Reptiles	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Lampropeltis getula nigra</i>	Black Kingsnake	S3	G5T5		
Reptiles	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Lampropeltis calligaster calligaster</i>	Prairie Kingsnake	S3S4	G5T5		
Reptiles	C	Mesic Upland Forests	C.4	Lower Slope/High Terrace Hardwood Forests	<i>Lampropeltis calligaster rhombomaculata</i>	Mole Kingsnake	S2	G5T5		
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Egretta caerulea</i>	Little Blue Heron	S2B,SZN	G5		



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Mycteria americana</i>	Wood Stork	S2N	G4	LE	PS:LE
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Elanoides forficatus</i>	Swallow-Tailed Kite	S2B	G5		
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Melanerpes erythrocephalus</i>	Red-Headed Woodpecker	S4S5	G5		
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Campephilus principalis</i>	Ivory-Billed Woodpecker	SX	GH	LE	LE
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Hylocichla mustelina</i>	Wood Thrush	S5B,SZN	G5		
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Vermivora bachmanii</i>	Bachman's Warbler	SXB	GH	LE	LE
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Dendroica cerulea</i>	Cerulean Warbler	S2B,SZN	G4		
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Protonotaria citrea</i>	Prothonotary Warbler	S5B,SZN	G5		
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Limothlypis swainsonii</i>	Swainson's Warbler	S3S4N, SZB	G4		
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Oporornis formosus</i>	Kentucky Warbler	S5B,SZN	G5		
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Anhinga anhinga</i>	Anhinga	S3B,S1N	G5		
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Nycticorax nycticorax</i>	Black-Crowned Night-Heron	S3B,S4N	G5		
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Seiurus motacilla</i>	Louisiana Waterthrush	S3B,SZN	G5		
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests		Migrant Songbirds				
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Euphagus carolinus</i>	Rusty Blackbird	S2	G5		
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Egretta thula</i>	Snowy Egret	S4B,S1N	G5		



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Egretta tricolor</i>	Tricolored Heron	S2B,S1N	G5		
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Eudocimus albus</i>	White Ibis	S2B,S3N	G5		
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Nycticorax violaceus</i>	Yellow-Crowned Night-Heron	S3B,S1N	G5		
Birds	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Anas rubripes</i>	American Black Duck	S2N	G5		
Mammals	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Myotis lucifugus</i>	Little Brown Myotis	S3	G5		
Mammals	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Myotis austroriparius</i>	Southeastern Myotis	S1S2	G3G4		
Mammals	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Myotis grisescens</i>	Gray Myotis	S1	G3	LE	LE
Mammals	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Myotis sodalis</i>	Indiana Or Social Myotis	SAN	G2	LE	LE
Mammals	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Lasionycteris noctivagans</i>	Silver-Haired Bat	SA?	G5		
Mammals	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Lasiurus intermedius</i>	Northern Yellow Bat	S2?	G4G5		
Mammals	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-Eared Bat	S3	G3G4		
Mammals	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Ursus americanus</i>	Black Bear	S1	G5	LE	(PS)
Mammals	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Ursus americanus luteolus</i>	Louisiana Black Bear	S1	G5T2	LE	LT
Mammals	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Lasiurus cinereus</i>	Hoary Bat	S3	G5		(PS)
Mammals	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Myotis septentrionalis</i>	Northern Myotis	S2?	G4		
Mammals	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Puma concolor coryi</i>	Florida Panther	SX	G5T1	LE	LE



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Reptiles	D	Bottomland Hardwood Forests	D.1	Bottomland Hardwood Forests	<i>Lampropeltis getula nigra</i>	Black Kingsnake	S3	G5T5		
Birds	E	Riverfront Forests/Herblands/Sandbars	E.1	Cottonwood/Black Willow/River Birch Woodlands	<i>Dendroica cerulea</i>	Cerulean Warbler	S2B,SZN	G4		
Birds	E	Riverfront Forests/Herblands/Sandbars	E.1	Cottonwood/Black Willow/River Birch Woodlands	<i>Anhinga anhinga</i>	Anhinga	S3B,S1N	G5		
Birds	E	Riverfront Forests/Herblands/Sandbars	E.1	Cottonwood/Black Willow/River Birch Woodlands	<i>Haliaeetus leucocephalus</i>	Bald Eagle	S2B,S2N	G4	LE	PS:LT
Birds	E	Riverfront Forests/Herblands/Sandbars	E.1	Cottonwood/Black Willow/River Birch Woodlands	<i>Nycticorax nycticorax</i>	Black-Crowned Night-Heron	S3B,S4N	G5		
Birds	E	Riverfront Forests/Herblands/Sandbars	E.1	Cottonwood/Black Willow/River Birch Woodlands	<i>Egretta caerulea</i>	Little Blue Heron	S2B,SZN	G5		
Birds	E	Riverfront Forests/Herblands/Sandbars	E.1	Cottonwood/Black Willow/River Birch Woodlands	<i>Seiurus motacilla</i>	Louisiana Waterthrush	S3B,SZN	G5		
Birds	E	Riverfront Forests/Herblands/Sandbars	E.1	Cottonwood/Black Willow/River Birch Woodlands	<i>Pandion haliaetus</i>	Osprey	S3B,S1S2N	G5		
Birds	E	Riverfront Forests/Herblands/Sandbars	E.1	Cottonwood/Black Willow/River Birch Woodlands	<i>Protonotaria citrea</i>	Prothonotary Warbler	S5B,SZN	G5		
Birds	E	Riverfront Forests/Herblands/Sandbars	E.1	Cottonwood/Black Willow/River Birch Woodlands	<i>Euphagus carolinus</i>	Rusty Blackbird	S2	G5		
Birds	E	Riverfront Forests/Herblands/Sandbars	E.1	Cottonwood/Black Willow/River Birch Woodlands	<i>Egretta thula</i>	Snowy Egret	S4B,S1N	G5		
Birds	E	Riverfront Forests/Herblands/Sandbars	E.1	Cottonwood/Black Willow/River Birch Woodlands	<i>Egretta tricolor</i>	Tricolored Heron	S2B,S1N	G5		
Birds	E	Riverfront Forests/Herblands/Sandbars	E.1	Cottonwood/Black Willow/River Birch Woodlands	<i>Eudocimus albus</i>	White Ibis	S2B,S3N	G5		
Birds	E	Riverfront Forests/Herblands/Sandbars	E.1	Cottonwood/Black Willow/River Birch Woodlands	<i>Mycteria americana</i>	Wood Stork	S2N	G4	LE	PS:LE
Birds	E	Riverfront Forests/Herblands/Sandbars	E.1	Cottonwood/Black Willow/River Birch Woodlands	<i>Nycticorax violaceus</i>	Yellow-Crowned Night-Heron	S3B,S1N	G5		
Mammals	E	Riverfront Forests/Herblands/Sandbars	E.1	Cottonwood/Black Willow/River Birch Woodlands	<i>Myotis sodalis</i>	Indiana Or Social Myotis	SAN	G2	LE	LE



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Mammals	E	Riverfront Forests/ Herblands/Sandbars	E.1	Cottonwood/Black Willow/ River Birch Woodlands	<i>Lasiurus cinereus</i>	Hoary Bat	S3	G5		(PS)
Mammals	E	Riverfront Forests/ Herblands/Sandbars	E.1	Cottonwood/Black Willow/ River Birch Woodlands	<i>Myotis grisescens</i>	Gray Myotis	S1	G3	LE	LE
Mammals	E	Riverfront Forests/ Herblands/Sandbars	E.1	Cottonwood/Black Willow/ River Birch Woodlands	<i>Lasiurus intermedius</i>	Northern Yellow Bat	S2?	G4G5		
Mammals	E	Riverfront Forests/ Herblands/Sandbars	E.1	Cottonwood/Black Willow/ River Birch Woodlands	<i>Myotis septentrionalis</i>	Northern Myotis	S2?	G4		
Mammals	E	Riverfront Forests/ Herblands/Sandbars	E.1	Cottonwood/Black Willow/ River Birch Woodlands	<i>Myotis lucifugus</i>	Little Brown Myotis	S3	G5		
Mammals	E	Riverfront Forests/ Herblands/Sandbars	E.1	Cottonwood/Black Willow/ River Birch Woodlands	<i>Lasionycteris noctivagans</i>	Silver-Haired Bat	SA?	G5		
Mammals	E	Riverfront Forests/ Herblands/Sandbars	E.1	Cottonwood/Black Willow/ River Birch Woodlands	<i>Ursus americanus luteolus</i>	Louisiana Black Bear	S1	G5T2	LE	LT
Mammals	E	Riverfront Forests/ Herblands/Sandbars	E.1	Cottonwood/Black Willow/ River Birch Woodlands	<i>Ursus americanus</i>	Black Bear	S1	G5	LE	(PS)
Birds	F	Wet Pine Savannas/ Flatwoods	F.1	Wet Pine Savannas	<i>Melanerpes erythrocephalus</i>	Red-Headed Woodpecker	S4S5	G5		
Birds	F	Wet Pine Savannas/ Flatwoods	F.1	Wet Pine Savannas	<i>Ammodramus henslowii</i>	Henslow's Sparrow	S3N	G4		
Birds	F	Wet Pine Savannas/ Flatwoods	F.1	Wet Pine Savannas	<i>Ammodramus leconteii</i>	Le Conte's Sparrow	S3N	G4		
Birds	F	Wet Pine Savannas/ Flatwoods	F.1	Wet Pine Savannas	<i>Coturnicops noveboracensis</i>	Yellow Rail	S2N	G4		
Birds	F	Wet Pine Savannas/ Flatwoods	F.1	Wet Pine Savannas	<i>Falco sparverius paulus</i>	Southeastern American Kestrel	S3B,SZN	G5T4		
Birds	F	Wet Pine Savannas/ Flatwoods	F.1	Wet Pine Savannas	<i>Grus canadensis pulla</i>	Mississippi Sandhill Crane	S1	G5T1	LE	LE
Birds	F	Wet Pine Savannas/ Flatwoods	F.1	Wet Pine Savannas	<i>Lanius ludovicianus</i>	Loggerhead Shrike	S4	G4		
Birds	F	Wet Pine Savannas/ Flatwoods	F.1	Wet Pine Savannas	<i>Scolopax minor</i>	American Woodcock	S?	G5		



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Birds	F	Wet Pine Savannas/Flatwoods	F.1	Wet Pine Savannas	<i>Sitta pusilla</i>	Brown-Headed Nuthatch	S4B	G5		
Mammals	F	Wet Pine Savannas/Flatwoods	F.1	Wet Pine Savannas	<i>Myotis lucifugus</i>	Little Brown Myotis	S3	G5		
Mammals	F	Wet Pine Savannas/Flatwoods	F.1	Wet Pine Savannas	<i>Myotis sodalis</i>	Indiana Or Social Myotis	SAN	G2	LE	LE
Mammals	F	Wet Pine Savannas/Flatwoods	F.1	Wet Pine Savannas	<i>Lasionycteris noctivagans</i>	Silver-Haired Bat	SA?	G5		
Mammals	F	Wet Pine Savannas/Flatwoods	F.1	Wet Pine Savannas	<i>Ursus americanus</i>	Black Bear	S1	G5	LE	(PS)
Mammals	F	Wet Pine Savannas/Flatwoods	F.1	Wet Pine Savannas	<i>Ursus americanus luteolus</i>	Louisiana Black Bear	S1	G5T2	LE	LT
Mammals	F	Wet Pine Savannas/Flatwoods	F.1	Wet Pine Savannas	<i>Lasiurus cinereus</i>	Hoary Bat	S3	G5		(PS)
Mammals	F	Wet Pine Savannas/Flatwoods	F.1	Wet Pine Savannas	<i>Lasiurus intermedius</i>	Northern Yellow Bat	S2?	G4G5		
Mammals	F	Wet Pine Savannas/Flatwoods	F.1	Wet Pine Savannas	<i>Puma concolor coryi</i>	Florida Panther	SX	G5T1	LE	LE
Amphibians	F	Wet Pine Savannas/Flatwoods	F.2	Slash Pine Flatwoods	<i>Amphiuma pholeter</i>	One-Toed Amphiuma	S1	G3	LE	
Birds	F	Wet Pine Savannas/Flatwoods	F.2	Slash Pine Flatwoods	<i>Scolopax minor</i>	American Woodcock	S?	G5		
Birds	F	Wet Pine Savannas/Flatwoods	F.2	Slash Pine Flatwoods	<i>Melanerpes erythrocephalus</i>	Red-Headed Woodpecker	S4S5	G5		
Birds	F	Wet Pine Savannas/Flatwoods	F.2	Slash Pine Flatwoods	<i>Sitta pusilla</i>	Brown-Headed Nuthatch	S4B	G5		
Birds	F	Wet Pine Savannas/Flatwoods	F.2	Slash Pine Flatwoods	<i>Campephilus principalis</i>	Ivory-Billed Woodpecker	SX	GH	LE	LE
Birds	F	Wet Pine Savannas/Flatwoods	F.2	Slash Pine Flatwoods	<i>Dendroica discolor</i>	Prairie Warbler	S5B,SZN	G5		
Birds	F	Wet Pine Savannas/Flatwoods	F.2	Slash Pine Flatwoods	<i>Picoides borealis</i>	Red-Cockaded Woodpecker	S1	G3	LE	LE
Crustaceans	F	Wet Pine Savannas/Flatwoods	F.2	Slash Pine Flatwoods	<i>Procambarus fitzpatricki</i>	Spiny-Tailed Crayfish	S2	G2		
Mammals	F	Wet Pine Savannas/Flatwoods	F.2	Slash Pine Flatwoods	<i>Lasiurus intermedius</i>	Northern Yellow Bat	S2?	G4G5		
Mammals	F	Wet Pine Savannas/Flatwoods	F.2	Slash Pine Flatwoods	<i>Lasiurus cinereus</i>	Hoary Bat	S3	G5		(PS)
Mammals	F	Wet Pine Savannas/Flatwoods	F.2	Slash Pine Flatwoods	<i>Myotis lucifugus</i>	Little Brown Myotis	S3	G5		



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Mammals	F	Wet Pine Savannas/Flatwoods	F.2	Slash Pine Flatwoods	<i>Puma concolor coryi</i>	Florida Panther	SX	G5T1	LE	LE
Mammals	F	Wet Pine Savannas/Flatwoods	F.2	Slash Pine Flatwoods	<i>Ursus americanus luteolus</i>	Louisiana Black Bear	S1	G5T2	LE	LT
Mammals	F	Wet Pine Savannas/Flatwoods	F.2	Slash Pine Flatwoods	<i>Ursus americanus</i>	Black Bear	S1	G5	LE	(PS)
Reptiles	F	Wet Pine Savannas/Flatwoods	F.2	Slash Pine Flatwoods	<i>Regina rigida deltae</i>	Delta Crayfish Snake	S2	G5T3T4Q		
Reptiles	F	Wet Pine Savannas/Flatwoods	F.2	Slash Pine Flatwoods	<i>Regina rigida sinicola</i>	Gulf Crayfish Snake	S3	G5T5		
Amphibians	G	Spring Seeps	G.1	Hardwood Seeps	<i>Gyrinophilus porphyriticus</i>	Spring Salamander	S1	G5	LE	
Amphibians	G	Spring Seeps	G.1	Hardwood Seeps	<i>Hemidactylium scutatum</i>	Four-Toed Salamander	S1S2	G5		
Amphibians	G	Spring Seeps	G.1	Hardwood Seeps	<i>Plethodon websteri</i>	Webster's Salamander	S3	G3		
Amphibians	G	Spring Seeps	G.1	Hardwood Seeps	<i>Plethodon ainsworthi</i>	Baysprings Salamander	SX	GH		
Amphibians	G	Spring Seeps	G.1	Hardwood Seeps	<i>Plethodon ventralis</i>	Southern Zigzag Salamander	S2	G4		
Amphibians	G	Spring Seeps	G.1	Hardwood Seeps	<i>Pseudotriton ruber</i>	Red Salamander	S3	G5		
Amphibians	G	Spring Seeps	G.1	Hardwood Seeps	<i>Pseudotriton montanus</i>	Mud Salamander	S2S3	G5		
Amphibians	G	Spring Seeps	G.1	Hardwood Seeps	<i>Pseudacris brachyphona</i>	Mountain Chorus Frog	S3	G5		
Birds	G	Spring Seeps	G.1	Hardwood Seeps	<i>Scolopax minor</i>	American Woodcock	S?	G5		
Birds	G	Spring Seeps	G.1	Hardwood Seeps	<i>Dendroica cerulea</i>	Cerulean Warbler	S2B,SZN	G4		
Birds	G	Spring Seeps	G.1	Hardwood Seeps	<i>Oporornis formosus</i>	Kentucky Warbler	S5B,SZN	G5		
Birds	G	Spring Seeps	G.1	Hardwood Seeps	<i>Seiurus motacilla</i>	Louisiana Waterthrush	S3B,SZN	G5		
Birds	G	Spring Seeps	G.1	Hardwood Seeps		Migrant Songbirds				
Birds	G	Spring Seeps	G.1	Hardwood Seeps	<i>Protonotaria citrea</i>	Prothonotary Warbler	S5B,SZN	G5		



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Birds	G	Spring Seeps	G.1	Hardwood Seeps	<i>Euphagus carolinus</i>	Rusty Blackbird	S2	G5		
Birds	G	Spring Seeps	G.1	Hardwood Seeps	<i>Piranga olivacea</i>	Scarlet Tanager	S2?B,SZN	G5		
Birds	G	Spring Seeps	G.1	Hardwood Seeps	<i>Limothlypis swainsonii</i>	Swainson's Warbler	S3S4N, SZB	G4		
Fishes	G	Spring Seeps	G.1	Hardwood Seeps	<i>Clinostomus funduloides</i>	Rosyside Dace	S2	G5		
Fishes	G	Spring Seeps	G.1	Hardwood Seeps	<i>Phoxinus erythrogaster</i>	Southern Redbelly Dace	S2	G5	LE	
Fishes	G	Spring Seeps	G.1	Hardwood Seeps	<i>Rhinichthys atratulus</i>	Blacknose Dace	S1	G5		
Fishes	G	Spring Seeps	G.1	Hardwood Seeps	<i>Etheostoma asprigene</i>	Mud Darter	S3	G4G5		
Fishes	G	Spring Seeps	G.1	Hardwood Seeps	<i>Etheostoma flabellare</i>	Fantail Darter	S2	G5		
Fishes	G	Spring Seeps	G.1	Hardwood Seeps	<i>Etheostoma kennicotti</i>	Stripetail Darter	S2	G4G5		
Fishes	G	Spring Seeps	G.1	Hardwood Seeps	<i>Etheostoma nigripinne</i>	Blackfin Darter	S2	G4		
Mammals	G	Spring Seeps	G.1	Hardwood Seeps	<i>Myotis austroriparius</i>	Southeastern Myotis	S1S2	G3G4		
Mammals	G	Spring Seeps	G.1	Hardwood Seeps	<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-Eared Bat	S3	G3G4		
Mammals	G	Spring Seeps	G.1	Hardwood Seeps	<i>Myotis sodalis</i>	Indiana Or Social Myotis	SAN	G2	LE	LE
Mammals	G	Spring Seeps	G.1	Hardwood Seeps	<i>Myotis grisescens</i>	Gray Myotis	S1	G3	LE	LE
Mammals	G	Spring Seeps	G.1	Hardwood Seeps	<i>Myotis septentrionalis</i>	Northern Myotis	S2?	G4		
Mammals	G	Spring Seeps	G.1	Hardwood Seeps	<i>Myotis lucifugus</i>	Little Brown Myotis	S3	G5		
Reptiles	G	Spring Seeps	G.1	Hardwood Seeps	<i>Regina rigida sinicola</i>	Gulf Crayfish Snake	S3	G5T5		
Reptiles	G	Spring Seeps	G.1	Hardwood Seeps	<i>Regina rigida deltae</i>	Delta Crayfish Snake	S2	G5T3T4Q		



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Amphibians	G	Spring Seeps	G.2	Pine Seeps	<i>Hemidactylium scutatum</i>	Four-Toed Salamander	S1S2	G5		
Amphibians	G	Spring Seeps	G.2	Pine Seeps	<i>Plethodon websteri</i>	Webster's Salamander	S3	G3		
Amphibians	G	Spring Seeps	G.2	Pine Seeps	<i>Pseudotriton ruber</i>	Red Salamander	S3	G5		
Birds	G	Spring Seeps	G.2	Pine Seeps	<i>Scolopax minor</i>	American Woodcock	S?	G5		
Crustaceans	G	Spring Seeps	G.2	Pine Seeps	<i>Procambarus barbiger</i>	Jackson Prairie Crayfish	S2	G2		
Crustaceans	G	Spring Seeps	G.2	Pine Seeps	<i>Procambarus cometes</i>	Mississippi Flatwoods Crayfish	S1	G1		
Crustaceans	G	Spring Seeps	G.2	Pine Seeps	<i>Procambarus connus</i>	Carrollton Crayfish	S1	GH		
Crustaceans	G	Spring Seeps	G.2	Pine Seeps	<i>Procambarus fitzpatricki</i>	Spiny-Tailed Crayfish	S2	G2		
Crustaceans	G	Spring Seeps	G.2	Pine Seeps	<i>Fallicambarus byersi</i>	Lavender Burrowing Crayfish	S3	G4		
Crustaceans	G	Spring Seeps	G.2	Pine Seeps	<i>Fallicambarus burrisi</i>	Burris' Burrowing Crawfish	S2	G3		
Mammals	G	Spring Seeps	G.2	Pine Seeps	<i>Myotis sodalis</i>	Indiana Or Social Myotis	SAN	G2	LE	LE
Mammals	G	Spring Seeps	G.2	Pine Seeps	<i>Myotis grisescens</i>	Gray Myotis	S1	G3	LE	LE
Mammals	G	Spring Seeps	G.2	Pine Seeps	<i>Myotis septentrionalis</i>	Northern Myotis	S2?	G4		
Mammals	G	Spring Seeps	G.2	Pine Seeps	<i>Myotis lucifugus</i>	Little Brown Myotis	S3	G5		
Reptiles	G	Spring Seeps	G.2	Pine Seeps	<i>Regina rigida deltae</i>	Delta Crayfish Snake	S2	G5T3T4Q		
Reptiles	G	Spring Seeps	G.2	Pine Seeps	<i>Regina rigida sinicola</i>	Gulf Crayfish Snake	S3	G5T5		
Birds	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Mycteria americana</i>	Wood Stork	S2N	G4	LE	PS:LE
Birds	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Elanoides forficatus</i>	Swallow-Tailed Kite	S2B	G5		



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Birds	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Protonotaria citrea</i>	Prothonotary Warbler	S5B,SZN	G5		
Birds	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Anhinga anhinga</i>	Anhinga	S3B,S1N	G5		
Birds	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Nycticorax nycticorax</i>	Black-Crowned Night-Heron	S3B,S4N	G5		
Birds	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Campephilus principalis</i>	Ivory-Billed Woodpecker	SX	GH	LE	LE
Birds	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Egretta caerulea</i>	Little Blue Heron	S2B,SZN	G5		
Birds	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Seiurus motacilla</i>	Louisiana Waterthrush	S3B,SZN	G5		
Birds	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Melanerpes erythrocephalus</i>	Red-Headed Woodpecker	S4S5	G5		
Birds	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Euphagus carolinus</i>	Rusty Blackbird	S2	G5		
Birds	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Egretta thula</i>	Snowy Egret	S4B,S1N	G5		
Birds	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Egretta tricolor</i>	Tricolored Heron	S2B,S1N	G5		
Birds	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Endocimus albus</i>	White Ibis	S2B,S3N	G5		
Birds	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Nycticorax violaceus</i>	Yellow-Crowned Night-Heron	S3B,S1N	G5		
Fishes	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Notropis melanostomus</i>	Blackmouth Shiner	S1S2	G2		
Mammals	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Myotis sodalis</i>	Indiana Or Social Myotis	SAN	G2	LE	LE
Mammals	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Myotis austroriparius</i>	Southeastern Myotis	S1S2	G3G4		
Mammals	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Lasiurus cinereus</i>	Hoary Bat	S3	G5		(PS)
Mammals	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Myotis grisescens</i>	Gray Myotis	S1	G3	LE	LE
Mammals	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Lasiurus intermedius</i>	Northern Yellow Bat	S2?	G4G5		
Mammals	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-Eared Bat	S3	G3G4		



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Mammals	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Myotis septentrionalis</i>	Northern Myotis	S2?	G4		
Mammals	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Puma concolor coryi</i>	Florida Panther	SX	G5T1	LE	LE
Mammals	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Ursus americanus luteolus</i>	Louisiana Black Bear	S1	G5T2	LE	LT
Mammals	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Ursus americanus</i>	Black Bear	S1	G5	LE	(PS)
Reptiles	H	Swamp Forests	H.1	Bald Cypress/Gum Swamp Forests	<i>Macrochelys temminckii</i>	Alligator Snapping Turtle	S3	G3G4		
Amphibians	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Amphiuma pholeter</i>	One-Toed Amphiuma	S1	G3	LE	
Amphibians	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Rana becksceri</i>	River Frog	S1	G5		
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Protonotaria citrea</i>	Prothonotary Warbler	S5B,SZN	G5		
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Anas rubripes</i>	American Black Duck	S2N	G5		
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Scolopax minor</i>	American Woodcock	S?	G5		
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Anhinga anhinga</i>	Anhinga	S3B,S1N	G5		
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Nycticorax nycticorax</i>	Black-Crowned Night-Heron	S3B,S4N	G5		
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Campephilus principalis</i>	Ivory-Billed Woodpecker	SX	GH	LE	LE
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Oporornis formosus</i>	Kentucky Warbler	S5B,SZN	G5		
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Egretta caerulea</i>	Little Blue Heron	S2B,SZN	G5		
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Seiurus motacilla</i>	Louisiana Waterthrush	S3B,SZN	G5		
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests		Migrant Songbirds				
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Melanerpes erythrocephalus</i>	Red-Headed Woodpecker	S4S5	G5		
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Enphagus carolinus</i>	Rusty Blackbird	S2	G5		



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Egretta thula</i>	Snowy Egret	S4B,S1N	G5		
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Elanoides forficatus</i>	Swallow-Tailed Kite	S2B	G5		
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Egretta tricolor</i>	Tricolored Heron	S2B,S1N	G5		
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Endocimus albus</i>	White Ibis	S2B,S3N	G5		
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Mycteria americana</i>	Wood Stork	S2N	G4	LE	PS:LE
Birds	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Nycticorax violaceus</i>	Yellow-Crowned Night-Heron	S3B,S1N	G5		
Fishes	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Notropis melanostomus</i>	Blackmouth Shiner	S1S2	G2		
Fishes	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Fundulus dispar</i>	Northern Starhead Topminnow	S3	G4		
Fishes	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Leptolucania ommata</i>	Pygmy Killifish	SH	G5		
Fishes	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Heterandria formosa</i>	Least Killifish	S3	G5		
Fishes	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Etheostoma zonifer</i>	Backwater Darter	S1	G3G4		
Mammals	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Myotis austroriparius</i>	Southeastern Myotis	S1S2	G3G4		
Mammals	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Lasiurus cinereus</i>	Hoary Bat	S3	G5		(PS)
Mammals	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Myotis grisescens</i>	Gray Myotis	S1	G3	LE	LE
Mammals	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Lasiurus intermedius</i>	Northern Yellow Bat	S2?	G4G5		
Mammals	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-Eared Bat	S3	G3G4		
Mammals	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Myotis septentrionalis</i>	Northern Myotis	S2?	G4		
Mammals	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Puma concolor coryi</i>	Florida Panther	SX	G5T1	LE	LE



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Mammals	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Ursus americanus luteolus</i>	Louisiana Black Bear	S1	G5T2	LE	LT
Mammals	H	Swamp Forests	H.2	Small Stream Swamp Forests	<i>Ursus americanus</i>	Black Bear	S1	G5	LE	(PS)
Amphibians	I	Upland Maritime	I.1	Maritime Woodlands	<i>Bufo nebulifer</i>	Gulf Coast Toad	S3	G5		
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Vermivora bachmanii</i>	Bachman's Warbler	SXB	GH	LE	LE
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Dendroica cerulea</i>	Cerulean Warbler	S2B,SZN	G4		
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Caprimulgus carolinensis</i>	Chuck-Will's-Widow	S4B	G5		
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Columbina passerina</i>	Common Ground-Dove	S1S2	G5		
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Oporornis formosus</i>	Kentucky Warbler	S5B,SZN	G5		
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Seiurus motacilla</i>	Louisiana Waterthrush	S3B,SZN	G5		
Birds	I	Upland Maritime	I.1	Maritime Woodlands		Migrant Songbirds				
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Passerina ciris</i>	Painted Bunting	S3S4B,SZN	G5		
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Dendroica discolor</i>	Prairie Warbler	S5B,SZN	G5		
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Protonotaria citrea</i>	Prothonotary Warbler	S5B,SZN	G5		
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Piranga olivacea</i>	Scarlet Tanager	S2?B,SZN	G5		
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Limnothlypis swainsonii</i>	Swainson's Warbler	S3S4N,SZB	G4		
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Hylocichla mustelina</i>	Wood Thrush	S5B,SZN	G5		



APPENDIX V: MS WILDLIFE SPECIES OF GREATEST CONSERVATION NEED BY FOREST COMMUNITY TYPES

ANIMAL GROUP	FLP FOREST COMMUNITY TYPE CODE	FOREST COMMUNITY TYPE	SUBTYPE CODE	SUBTYPE NAME	ANIMAL SPECIES SCIENTIFIC NAME	ANIMAL SPECIES COMMON NAME	STATE RANK (SRANK)	GLOBAL RANK (GRANK)	FEDERAL STATUS	STATE STATUS
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Helmitheros vermivorus</i>	Worm-Eating Warbler	S3B,SZN	G5		
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Aimophila aestivalis</i>	Bachman's Sparrow	S3B,S3S4N	G3		
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Ammodramus henslowii</i>	Henslow's Sparrow	S3N	G4		
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Ammodramus savannarum</i>	Grasshopper Sparrow	S3B,S3N	G5		(PS)
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Colinus virginianus</i>	Northern Bobwhite	S3S4	G5		(PS)
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Coturnicops noveboracensis</i>	Yellow Rail	S2N	G4		
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Falco sparverius paulus</i>	Southeastern American Kestrel	S3B,SZN	G5T4		
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Lanius ludovicianus</i>	Loggerhead Shrike	S4	G4		
Birds	I	Upland Maritime	I.1	Maritime Woodlands	<i>Scolopax minor</i>	American Woodcock	S?	G5		
Reptiles	I	Upland Maritime	I.1	Maritime Woodlands	<i>Pseudemys alabamensis</i>	Alabama Redbelly Turtle	S1	G1	LE	LE
Reptiles	I	Upland Maritime	I.1	Maritime Woodlands	<i>Rhadinaea flavilata</i>	Pine Woods Snake	S2S3	G4		
Reptiles	I	Upland Maritime	H.1	Maritime Woodlands	<i>Heterodon simus</i>	Southern Hognose Snake	SX	G2	LE	



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APPENDIX VI: PUBLIC COMMENTS

Governor Barbour designated the Mississippi Forestry Commission as the lead agency for the state's Forest Legacy Program in 2005. In order to participate in the program and receive funding in the future, the Mississippi must submit this *Assessment of Need* and receive approval from the Forest Service. The Mississippi Forest Stewardship Committee and State Forester assigned the task of developing the *AON* and garnering stakeholder and public input to a Forest Legacy Subcommittee composed of members of the Forest Stewardship Committee, representatives of land trusts, other agencies and organizations. This Subcommittee was also considered representative of most stakeholders and served to advise the staff on development of the *AON*, to review and comment on it and to finalize it for submission to the Forest Service.

Forest Legacy Subcommittee members included:

Cathy Shropshire, MS Wildlife Federation

Charles Knight, MS Department of Wildlife, Fisheries and Parks,
Museum of Natural Science

Clovis Reed, MS Department of Environmental Quality

Daniel Coggin, MS Land Trust

Darlene Slater, MS Forestry Commission

Debbie Gaddis, MS State Extension Service

Delmer Stamps, USDA Natural Resources Conservation Service

Don Brazil, MS Department of Wildlife, Fisheries and Parks

Don Neal, USDA Forest Service

Don Underwood, MS Soil and Water Conservation Service

Elizabeth Rooks-Barber, Barber and Mann, Inc.

Grant Larsen, MS Department of Marine Resources

John Tindall, MS Department of Wildlife, Fisheries and Parks

Kent Grizzard, MS Forestry Commission

Larry Jarrett, Natural Resources Initiative of North Mississippi

Randal Romedy, MS Forestry Commission



Robbie Fisher, The Nature Conservancy

Ronnie Myers, MS Forestry Commission

Trey Cooke, Delta Wildlife

During their planning meetings in 2005 and 2006, the FLP Subcommittee in a facilitated meetings developed the overarching goal for Mississippi's FLP, which mirrors the national goal:

To protect environmentally important forests in Mississippi threatened by conversion to non-forest use.

They also established objectives for the Mississippi FLP:

- ◆ Sustain native or rare unique forest ecosystems.
- ◆ Protect water quality
- ◆ Protect forests from development along lakes, rivers and to buffer protected lands
- ◆ Protect wildlife habitat
- ◆ Maintain traditional forest uses, including hunting and fishing
- ◆ Sustain productive forests
- ◆ Provide public recreation opportunities

Once the state goal and objectives were established, the Subcommittee broke into two stakeholder groups (called Red and Blue) to discuss and identify general areas of the state to be considered as potential Forest Legacy Areas (FLAs) based on data from several conservation plans such as the natural forest community rankings from the Mississippi Natural

Heritage Program (NHP) and other available data. The Red and Blue groups identified various areas for consideration based on the national criteria for FLAs and the state goal and objectives. The initial lists of potential FLAs included target physiographic regions of the state, riparian areas, watersheds, and buffers around large tracts of public land such as and of potential forest legacy areas (listed below).

Areas of Mississippi identified by FLP Subcommittee for consideration as FLAs (by Ecoregion):

**1. East Gulf Coastal Plain Ecoregion
(including Northern Gulf of Mexico)**

1.1 Longleaf pine forests including pine savannas

1.2 Pascagoula River watershed

- ◆ Ragland hills
- ◆ Black Creek watershed
- ◆ Okatoma Creek watershed

1.3 Forested private lands around Sandhill Crane NWR

1.4 Bottomland hardwoods along major drainages

1.5 Forest surrounding urbanization/municipalities in Hancock, Harrison and Jackson County

1.6 Clark Creek watershed

1.7 Private lands around Homochitto National Forest



2. Upper East Gulf Coastal Plain Ecoregion

2.1. Forest communities near urban centers

2.1a. Jackson Area

- ◆ Forest around Ross Barnett – bottomland hardwoods in Pearl River drainage

2.1.b. Memphis/Desoto County

- ◆ Forests around Arkabutla and Sardis Lake
- ◆ State Parks

2.1.b Oxford

2.2 Natchez Trace Corridor plus Northeast Mississippi (Tennessee Hills Drainage)

2.3 Buttahatchie River watershed

2.4 Pontotoc Ridge

- ◆ Private lands around Holly Springs National Forest

3. Mississippi River Alluvial Plain Ecoregion

3.1 Lower Yazoo and Sunflower River Drainages – bottomland hardwood corridors

3.2 Private forested lands around St. Catherines Creek National Wildlife Refuge

Following these initial meetings of the FLP subcommittee, the MFC staff then collected additional information about the natural forest communities in each potential legacy area, population changes, and changes in forest cover in recent years and tried to determine where

forests (by county) are currently or soon will be most imperiled by conversion to non-forest use. In addition to the expertise and input of the FLP Subcommittee members and others, U.S. Census data was used to identify areas of significant population growth from 1990 to 2000 and areas projected to experience significant growth from 2005 to 2015 in the state. Staff from the Mississippi NHP also aided in identifying the most biodiverse forest areas in the state.

Some areas that were suggested for the FLP were eliminated after reviewing and comparing population change data and NHP data, because the threat of conversion to non-forest use in these areas appeared to be low. Examples of areas eliminated are the Yazoo/Big Sunflower drainages and the southwest Mississippi area. While these areas are certainly ecologically significant, the threat of conversion is low at this time. They will be analyzed again in future iterations of this AON for possible inclusion.

Three areas of the state were identified as Mississippi Forest Legacy Areas:

- ◆ Southeast Mississippi (13 counties)
- ◆ Central Mississippi (portions of 5 counties with a focus on the Pearl, Big Black and Strong Rivers)
- ◆ Northeast Mississippi (portions of 7 counties with a focus on the Tennessee-Tombigbee Waterway and the Buttahatchie River)

All the comments and required data was collected and compiled by Elizabeth Rooks-Barber, consultant to the MFC, into a draft AON and presented to the State Forest Stewardship Committee and the FLP



Subcommittee in June, 2006. The committees reviewed the draft document and submitted comments and suggestions which were compiled into a second draft that was posted on the MFC website for public review in October, 2006. The MFC also advertised the availability of the draft *AON* for review and comment in the *Hattiesburg American* (Hattiesburg - south Mississippi), *The Clarion-Ledger* (Jackson – central Mississippi) and *The Daily Journal* (Tupelo – north Mississippi) and announced a public meeting to review and comment on the draft *AON*. The public meeting was held in Pearl, Mississippi on November 16, 2006 at the State Fire Training Academy and was attended by 11 people.

The goals of the public involvement process were:

1. To provide information to stakeholders and the public about the FLP.
2. To elicit any concerns, suggestions and general comments about the FLP.

Minutes of the public meeting are available from the MFC upon request.

During the public meeting, consultant Elizabeth Rooks-Barber and MFC staff Jeff DeMatteis reviewed the draft *AON* in detail and recorded comments with the assistance of Kim Smith.

The draft remained posted on the MFC website until January 15, 2007 for comments. All comments were considered and the *AON* was revised in January and February 2007 and prepared for submission to the Forest Service for approval.

The following is a summary of the general comments and questions submitted by individuals, organizations, land trusts, agencies and FLP Subcommittee members (comments and suggestions regarding grammatical errors and minor text corrections were excluded from this list). Comments are sorted by section.

Table of Contents:

Comment: Please refer to “Forest Legacy Law” as “Forest Legacy Statute or Legislation”.

MFC Response: Change noted and made throughout document.

Introduction and Purpose:

Comment: One of the FLP state objectives is confusing: “Prevent development along lakes, rivers and protected lands.” Don’t you mean that the goal is to target forests adjacent to lakes and along river corridors and to buffer protected lands?

MFC Response: Yes. We revised that objective to read: “Protect forests from development along lakes, rivers and to buffer protected lands”.

Chapter 1: Mississippi’s Forests

Comment: Please indicate which forests are the most important according to the *Mississippi Comprehensive Wildlife Conservation Strategy* and how many acres are in each type. Also, could you add a map



showing where these types are?

MFC Response: Yes, that information has been added to the detailed descriptions of the Forest Community subtypes in the Appendix.

Comment: How will mineral rights be handled? This would be a good place to make a statement that the impact of someone else owning and possibly exercising existing mineral rights will be examined on a case by case basis.

MFC Response: Done.

Chapter 3: Trends and Threats to Forest Resources

Comment: Four ecosystems are identified as being in peril of complete or near-complete loss. Will those be targeted in FLP in Mississippi? How do they relate geographically to the population growth and sprawl?

MFC Response: The longleaf pine forest and savannas, riparian forests and streams are listed in the Values and Priorities for Mississippi's FLP in the respective descriptions of FLAs in Chapter 6.

Comment: There is a reference to the Virginia study on probability for forestry based on population density. Do we have any population density figures for Mississippi and can we use this to display the probability to practice forestry in Mississippi?

MFC Response: Further discussion of the people per square mile was included in this chapter. The data has also been included in tables 4, 5 and 6 as part of the description of each FLP in Chapter 6.

Comment: Throughout the document, there are references to various threats to convert forest lands. All these threats should be presented in terms of an analysis showing what areas of the state various environmentally important forest types might be converted to non-forest use.

MFC Response: Acknowledged. General threat information is included in Appendix III in the discussion of Mississippi Forest Communities.

Chapter 4: Existing Conservation Measures for Forests:

Comment: A statement on how each existing program compliments Mississippi's FLP is needed.

MFC Response: A statement was added to each program's description.

Comment: Please include under the description of Mississippi's Forest Stewardship Program that all FLP projects must have a Forest Stewardship Plan and multiple resource plan.

MFC Response: A statement was added here and in Chapter 5 and to the Application Form in the Appendix.



Comment: Would acres enrolled under FLP no longer be eligible for planting under the Mississippi Reforestation Tax Credit?

MFC Response: Unsure, but will clarify this before program is implemented.

Comment: Please add mention of the Mississippi Coastal Impact Assistance Program, the Wildlife Heritage Fund, Mississippi's Natural Areas registry, and the North American Wetlands Conservation Act to the list of existing state and federal programs.

MFC Response: Change made.

Comment: Mention lands owned by Native Americans.

MFC Response: A discussion is included in this chapter regarding lands owned by the Mississippi's Band of Choctaw Indians.

Chapter 5: Implement Mississippi's Forest Legacy Program

Comment: Will priority be given to land acquisition over conservation easements.

MFC Response: No. The decision to acquire an easement or to acquire fee simple title to a parcel will depend on the interest of the landowner, the threats to conversion, location, environmental significance and other factors. The Mississippi program will not give preference to one option over the other.

Comment: In discussion on *Obtaining Interest in Land*, property must

be held in perpetuity. Change the word "may" to "must".

MFC Response: Done.

Comment: Under *Reserved Areas*, you could still have a house or structure on a conservation easement.

MFC Response: Correct, but we prefer that an easement not include any structures or reserved areas and the Mississippi FLP will give priority to nominated parcels without structures.

Comment: Organizations eligible to hold easements *donated* include land trusts. If \$1 of federal money goes into the purchase of land, then the easement must be held by government. Mention that up to 75 percent of the total costs can be paid by Forest Legacy and 25 percent is non-federal.

MFC Response: Acknowledged. Statements added and clarified.

Comment: Under *Parcel Eligibility Criteria*, "Strategic" should be the third criteria and "Project Readiness" should be listed as fourth. "Project Readiness" is only a consideration. It is not scored.

MFC Response: Acknowledged. Changes were made.

Comment: Under *Cost Share Requirements*, since the discussion is so specific about appraisals, add that appraisals are done for the purposes of this program and that landowners need to consult their tax professional about how to qualify for any tax benefits.

MFC Response: Acknowledged and statement added.



Chapter 6: Mississippi's Forest Legacy Areas

Comment: Can you add a population density map next to the map from the NHP showing areas of higher biodiversity?

MFC Response: Yes. Population map has been added.

Comment: Please further explain how the three FLAs were selected.

MFC Response: Done. This chapter was revised to further explain how the areas were defined by the Forest Legacy Subcommittee with public and stakeholder input. The *Public Comment* in Appendix VI also includes an explanation.

Comment: The draft FLAs cover entire counties. In some areas, wouldn't it be better to refine the FLAs to important watershed areas within the counties where possible.

MFC Response: Yes. After the public meeting in November 2006, MFC worked with staff from the Mississippi Natural Heritage Program at MDWFP's Museum of Natural Science to refine the Central and Northeast FLAs which removed parts of Hinds, Copiah and Simpson Counties and western parts of Clay, Monroe and Lowndes Counties. The acreages for each FLA were refigured based on the size of the new FLA, minus all municipalities, roads, public lands and large water bodies.

General Comments:

Comment: The process of acquiring FLP parcels seems to take a long time from nomination, to acceptance to receiving the funds to acquire the easement or donation (could be 18 months or more). How can the state make it easier for landowners to participate?

MFC Response: We acknowledge that it may be a lengthy process. It is important to enlist the help of land trusts and partners in the state to help nominate worthy parcels and to communicate clearly to the landowner the potential time frame at the beginning of the nomination process. There should be a pre-appraisal and pre-acquisition meeting with the landowner.

Comment: How will the FLP be publicized once it is approved?

MFC Response: Through press releases, the MFC website and by enlisting the help of partners that participate in the Forest Stewardship Committee and agencies and organizations such as Mississippi Cooperative Extension Service, field days, land trusts, the NRCS, FSA and Soil and Water Conservation Districts, county foresters and others to distribute information about the program.

Comment: You may also want to consider promoting the program to counties and municipalities.

MFC Response: Acknowledged. We will provide information to county/city planners and the Mississippi Municipal Association and the Mississippi Supervisors Association.



Comment: There is some concern about purchasing conservation easements expressed by land trust representatives. Typically, conservation easements are donated in Mississippi to a qualified land trust or government entity.

MFC Response: Acknowledged. Because of limited funding, FLP will only permit acquisition or an easement of one or two parcels in the state per year, and it is very competitive. Thus it is unlikely that this will create an expectation that easements can be purchased. However, MFC will work closely with land trusts in the state on this issue to ensure the FLP program does not conflict with the operations of land trusts in the state.

Special thanks to individuals who submitted comments.





APPENDIX VII: MISSISSIPPI FOREST LEGACY APPLICATION FORM

The following is an eight part application for Mississippi's Forest Legacy program that should be submitted to the Mississippi Forestry Commission by the landowner or an authorized representative of the landowner before August 15th of the year prior to the year for which the landowner wishes his/her property to be considered for nomination as a FLP tract. Prior to completing this application, the landowner is strongly encouraged to review this Forest Legacy Program *Assessment of Need* for guidance on the program, and to pay close attention to Chapters 5 and 6 that describe how tracts will be evaluated locally, regionally and nationally and the priority

areas and goals for Mississippi's program. Only tracts that are located in one of the designated Mississippi Forest Legacy Areas will be considered and must meet the national and state criteria and have a completed application submitted by the August 15th deadline.

For assistance and more information go to www.mfc.state.ms.us or contact the MFC at 601-359-1386.





APPLICATION FORM

Mississippi's Forest Legacy Program Goal: *To protect environmentally important forests in Mississippi threatened by conversion to non-forest uses through the use of conservation easements or purchase of fee simple title to accepted parcels.*

Instructions to FLP Applicant:

1. Submit this completed application and all attachments to the Mississippi Forestry Commission by August 15 for priority consideration to:

Forest Legacy Coordinator
Mississippi Forestry Commission
301 North Lamar Street, Suite 300
Jackson, Mississippi 39201
www.mfc.state.ms.us

2. Landowner or Representative: Please fill out Sections I-VIII of this application completely. The Evaluators will complete Section IX.
3. Attach two (2) copies the following items to this application for each contiguous parcel nominated:
 - _____ Completed Application
 - _____ Name(s) and address(es) of other owner(s) of record for this tract
 - _____ Copy of road map indicating location of the property
 - _____ Copy of plat or survey map of the parcel (if available)
 - _____ Aerial photo (can be obtained from your local Farm Services Agency Office)
 - _____ Legal description (if available)
 - _____ Copy of warranty deed
 - _____ List of existing permanent improvements on the tract, including houses, barns, lakes, ponds, dams, wells, roads and other structures and the total number of acres occupied by improvements.
 - _____ Map identifying all dams, dumps, or waste disposal sites on the property.
 - _____ Forest management plan (Multiple-resource or Forest Stewardship Plan)

NOTE: All materials become the property of the State of Mississippi and are not returnable.

Questions? Call the MFC at 601-359-1386 or e-mail jdematteis@mfc.state.ms.us

FOR OFFICE USE ONLY Application Number: MS-_____ Date: _____



I. APPLICANT INFORMATION

Landowner's Name: _____
 Full Mailing Address: _____
 City: _____ State _____ Zip _____
 Daytime Phone: _____ Cell: _____
 Fax: _____ e-mail: _____

AUTHORIZED REPRESENTATIVE FOR LANDOWNER (IF DIFFERENT)

Agent's Name: _____
 Full Mailing Address: _____
 City: _____ State _____ Zip _____
 Daytime Phone: _____ Cell: _____
 Fax: _____ e-mail: _____

List all co-owners of this property: _____

II. PROPERTY INFORMATION

- Location: County: _____
 Township: _____ Range: _____ Section(s): _____
- Deed Reference (Book and Page Number): _____
- Tax Map #: _____ Assessors Plat and Lot Numbers: _____
- If in an area covered by zoning, how is property currently zoned? _____
- Total property acres: _____ Total forested acres: _____
- How much of the total acres above are you nominating to the Forest Legacy Program?
 Forest acres: _____ Open or cleared acres: _____ Acres of water: _____ Total: _____
- I am interested in a: _____ *conservation easement*, or _____ *transferring total ownership of the land*
- Is any of this acreage enrolled in the American Tree Farm System or other management program?
 _____ Yes _____ No Program: _____ Acres covered: _____
- Additional Comments: _____

FOR OFFICE USE ONLY Application Number: MS- _____ Date: _____



III. LANDOWNER GOALS AND OBJECTIVES

1. Describe your long-term goals and objectives for the nominated property.

It may help to think about the following: Why is the property important to you? Why do you own it? Why did you buy it? What would you like to do on and with this property? What would you like to see happen to this property in the future? (You may attach extra pages if needed.)

2. Do you have a written forest management plan or Forest Stewardship Plan? _____
If yes, please attach a copy.

Have you been working with a forester, land manager or biologist who could provide technical information about your property? _____ If so, may we contact him/her? _____

Name and phone number of forester/land manager or biologist:

Name: _____ Phone Number: _____

FOR OFFICE USE ONLY **Application Number: MS-**_____ **Date:** _____



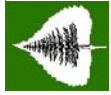
IV. LANDOWNER SELF EVALUATION:

Please help us envision the uniqueness of your property. You may attach extra pages if needed.

A. Prioritize in order the following reasons why your property should be enrolled in the Forest Legacy Program (1-most important to 10-least important).

- ___ Prevent conversion/development/fragmentation of an important forest resource
- ___ Protection of scenic resources
- ___ Protect/enhance a watershed or important drinking water supply
- ___ Protect/enhance an important riparian/hydrologic area
- ___ Provide linkage between public properties, protected areas and greenways
- ___ Protect/enhance/restore fish and/or wildlife habitat
- ___ Protect/enhance/restore habitat of rare, threatened, and/or endangered species, plant and/or animals
- ___ Provide for the continuation of traditional forest uses
- ___ Provide historical/cultural uniqueness or protection
- ___ Other _____

B. What is the importance of your property as it relates to public benefits (ecological, economic, social values)? Explain if your property provides important habitat for threatened or endangered animals or plants or species or natural communities of concern, provides important watershed or riparian values, is in a scenic viewshed, has formally designated cultural or historic features, provides public access, and/or demonstrates sound forest management.



- C. **What is the threat of development/fragmentation/conversion to non-forest use?** There are various kinds and degrees of threat to valuable forested areas, such as encroaching housing development, improved roads, sewer and power line extensions into undeveloped areas and the dividing of land ownership into smaller parcels. Complete the checklist below and explain in the comment section on page 6 how your property is threatened by development of conversion to other uses, or if maintained as forestland, can slow the development pressures in your area.

Yes	No
-----	----

- | | |
|--------------------------|--|
| <input type="checkbox"/> | A. Parcel is in danger of conversion within 5 years |
| <input type="checkbox"/> | B. Parcel may remain wooded, but will become further fragmented |
| <input type="checkbox"/> | C. Parcel is currently on the open market, or listed by realtors |
| <input type="checkbox"/> | D. Securing one or more sites now will stem further development |
| <input type="checkbox"/> | E. Parcel is remote, but vulnerable |
| <input type="checkbox"/> | F. Parcel is remnant of a forest type |
| <input type="checkbox"/> | G. Parcel may remain wooded, but is in danger of being over-harvested. |

Other: _____

- D. **Aquirability or Manageability of your property.** Even if a forested parcel is threatened with conversion to non-forest use, protecting it under the Forest Legacy Program is not always achievable. Complete the checklist and explain in your comments below the level of support for your proposal, other conservation partners involved, and/or how it complements other land conservation efforts.

Yes	No	n/a
-----	----	-----

- | | | | |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | A. The property is specifically identified in terms of priority, timing and cost in a local land use plan, state recreation plan, greenways or open space plans. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | B. Parcel may be available at below fair market value. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | C. Intensity and expense of management activities to protect the property value is economically feasible. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | D. Conservation of the property would increase the protection of existing natural areas or enhance the linking of greenways, adjacent public lands or other protected areas. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | E. Property can accommodate proposed priority uses and/or management activities without endangering or degrading its natural value. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | F. Property is/can be protected against future degradation from activities occurring on neighboring properties. |



V. COMMENTS

Other comments you may wish to add about your Forest Legacy Nomination or the uniqueness of your property.

VI. CONFIDENTIAL FINANCIAL INFORMATION

The following financial, deed and lien information shall remain confidential until such time as: 1) the application has been approved and all transactions are concluded, or 2) all title holders give written permission to release the information.

Financial Information

The following estimates are for preliminary use only. Any final offer for conservation easement purchase cannot exceed fair market value, as determined by an appraisal meeting federal appraisal standards.

- 1) What is the estimated total value of this property? \$ _____
- 2) What is the estimated value of the rights or interests proposed to be transferred by conservation easement to the Mississippi Forest Legacy Program? \$ _____ or what is the estimated value for fee simple acquisition? \$ _____
- 3) How was this value determined: _____ (examples: landowner's personal estimate, licensed appraiser, Realtor, written legal appraisal) Date of the appraisal (if completed): _____
- 4) Are you willing to donate part or all of the easement value? _____
 - What percent value are you willing to donate? 25% _____ 50% _____ 75% _____ 100% _____ Other _____
 - What is your approximate asking price for the interests being offered? _____
- 5) State the value of any other contribution you will make, either in donated value of in-kind services or financial. _____

NOTE: *Donations may constitute a charitable contribution for income tax purposes, depending on applicable Internal Revenue Service guidelines and regulations.*

FOR OFFICE USE ONLY Application Number: MS- _____ Date: _____



Liens and Encumbrances

Please list any and all liens and encumbrances on the property proposed for enrollment in the Mississippi Forest Legacy Program. Examples: Mortgages, utility easements, public rights of way, water flow or water use restrictions, septic systems or water easements, deed restrictions or covenants, mineral extraction rights (gas, oil, coal, sand and gravel, stone, etc.), tax liens, dump sites, underground fuel tanks, other environmental hazards, etc.

VII. PRELIMINARY IDENTIFICATION OF RIGHTS TO BE RETAINED AND SOLD

*It is important the following section be carefully and fully completed. The information you provide will directly affect the desirability of the parcel, appraised value and its priority as a Mississippi Forest Legacy parcel. Please, indicate which of the following uses, rights or interests you may wish to **keep** and which uses or interests you may wish to **sell** as part of the conservation easement.*

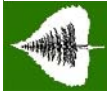
Note: Checking **sell** or **keep** does not commit you to anything at this time, it merely assists the Forest Legacy Committee when inspecting, prioritizing and evaluating your parcel. Also, note that development rights are the basic minimum rights to be conveyed on all Forest Legacy Tracts and therefore are not included on the list below.

KEEP	SELL	UNSURE	FOREST USE OR INTEREST
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The right to manage and harvest timber
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The right to collect mushroom, herbs, and craft items (e.g. grapevines)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mineral rights - unrestricted access to minerals (e.g. coal, gravel, etc.) *
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mineral rights - with restricted surface occupancy rights**
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Oil and gas rights - unrestricted access with oil and gas*
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Oil and gas rights - with restricted surface occupancy rights**
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Right to limit or control public access to your property
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The right to graze open areas (acres _____)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The right to farm open areas (acres _____)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The right to build or rebuild roads (other than forest management/protection roads)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ownership of existing buildings and other improvements . Please specify improvements and acres: _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The right to hunt, fish or trap (non-commercial only).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other recreational activities such as camping, hiking, cycling, horseback riding.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Motorized access
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Expansion of existing improvements.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	I would like to sell or transfer the entire property.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	I would like to sell or transfer part of the property.

Other. Please specify: _____

- * Retention of unrestricted mineral or oil/gas rights will exclude that portion of your property from consideration in the Mississippi FLP.
 ** Retention of restricted mineral or oil/gas rights which allows less than 10% surface disturbance may be consistent with the Mississippi FLP.

FOR OFFICE USE ONLY Application Number: MS-_____ Date: _____



VIII. TESTIMONY AND PERMISSION

The information in this application is true to the best of my (our) knowledge and belief. I (we), as the landowner or landowner's authorized representative (proof of authorization must accompany the application) agree to allow inspection, appraisal and survey of the property being offered for consideration under the Mississippi Forest Legacy Program. I (we) agree to allow members of the Mississippi Forestry Commission, the Mississippi Forest Legacy committee or their designee to inspect my property at any reasonable time for the purposes of this application. I understand I shall be notified in advance of all inspection visits.

I also understand that this property (i.e. conservation easement or fee simple title) will not be purchased if negotiations do not reach an amicable agreement, or if the property does not meet the needs or qualifications of the Mississippi Forest Legacy Program or if funding is unavailable. Conservation easements or fee simple title will only be purchased from willing sellers.

Print name of each title holder	Signature	Date

Mail completed application by August 15 to:

Forest Legacy Coordinator
Mississippi Forestry Commission
301 North Lamar Street, Suite 300
Jackson, MS 39201
(601) 359-1386
www.mfc.state.ms.us

FOR OFFICE USE ONLY	Application Number: MS-_____	Date: _____
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IX. MISSISSIPPI'S FOREST LEGACY PARCEL EVALUATION

Note to landowner: Your tract will be scored/evaluated by the Mississippi Forest Legacy Committee based on these criteria. They are provided with your application for informational purposes only. **DO NOT COMPLETE THIS SECTION.**

Note to evaluator: If parcel contains one or more of the following important resource values, place a check mark as indicated and add comments at the end.

A. Scenic Resources

Yes No

- ☐ 1. Parcel is adjacent to or in a viewshed visible from a scenic road, river, or trail designated by the State of Mississippi or the United States (maximum 10 points)
- ☐ 2. Parcel includes locally important panoramic views and/or exceptional short views (maximum 10 points)

Total Score: _____ (maximum score 20 points)

B. Riparian/Hydrologic Areas

Yes No

- ☐ 1. Parcel is situated on a river or stream (maximum 10 points)
- ☐ 2. Parcel has extensive (over 300') river or wetland shoreline (maximum 10 points)
- ☐ 3. Parcel is in 100-year flood plain (maximum 10 points)
- ☐ 4. Parcel contains a minimum 50' strip of native trees and shrubs as a natural buffer and sediment filter, or such a buffer will be restored (maximum 10 points)
- ☐ 5. Parcel includes a natural wetland or prior converted area that will be restored (maximum 10 points)
- ☐ 6. Parcel is situated within a water supply watershed, or groundwater aquifer recharge area (maximum 10 points)
- ☐ 7. Parcel provides immediate watershed/water supply protection (maximum 10 points)

Total Score: _____ (maximum score 70 points)

C. Fish and Wildlife Habitat

Yes No

- ☐ 1. Parcel contains outstanding habitat and other ecologically recognized criteria for one or more species that include (maximum 10 points):
- ☐ Forest interior nesting birds
 - ☐ Neotropical migrant species
 - ☐ Forest inhabiting mammals, reptiles, amphibians and invertebrates
 - ☐ Significant populations of resident species
 - ☐ Areas for resting and feeding of migratory species
- ☐ 2. Parcel exhibits connective habitats, corridors, habitat linkages and areas that reduce biological isolation (maximum 10 points)
- ☐ 3. Parcel will provide a functional buffer to protect a core habitat or corridor (maximum 10 points)

Total Score: _____ (maximum score 30 points)



D. Known Rare, Threatened and Endangered Species

Species to be considered under this criterion are those currently listed by the Mississippi Natural Heritage Program and those listed in the Federal Register.

Yes No

- ☐ 1. Parcel provides habitat supporting the occurrence of rare or endangered species (maximum 10 points)
- ☐ 2. Parcel is within a designated Natural Heritage Area (maximum 10 points)
- ☐ 3. Parcel provides suitable habitat for reoccupation by rare, threatened, or endangered species (either naturally or through translocation) (maximum 10 points)
- ☐ 4. Parcel provides functional buffer to protect habitat for species of concern, species that are significantly rare, or that are on the Mississippi Watch list (maximum 10 points)

Total Score: _____ (maximum score 40 points)

E. Known Cultural/Historical Areas

Yes No

- ☐ 1. Parcel contains forest related cultural resources (i.e., historic forest, historic mill or other forest industry site, etc.) (maximum 10 points)
- ☐ 2. Other historic or archeological resources (e.g., native american sites, battlegrounds, etc.) (maximum 10 points)

Total Score: _____ (maximum score 20 points)

F. Other Ecological Values

Yes No

- ☐ 1. Parcel is part of a large block of contiguous forest land (maximum 10 points)
- ☐ 2. Parcel provides a mix of native ecological communities (maximum 10 points)
- ☐ 3. Parcel includes ecological communities which are dwindling in Mississippi (maximum 10 points)
- ☐ 4. Parcel contains late successional growth forests (natural area) (maximum 10 points)

Total Score: _____ (maximum score 40 points)



G. Provides Opportunity for Continuation of Existing Traditional Forest Uses

Yes No

- ☐ ☐ 1. Parcel will remain available for timber and other forest products management under a Stewardship Plan (maximum 10 points)
- ☐ ☐ 2. Parcel will continue to serve watershed and water filtration roles (maximum 10 points)
- ☐ ☐ 3. Parcel will continue to provide fish and wildlife habitat (maximum 10 points)
- ☐ ☐ 4. Parcel will continue to provide outdoor recreation opportunities (maximum 10 points)
- ☐ ☐ 5. Parcel will continue to provide environmental education opportunities (maximum 10 points)
- ☐ ☐ 6. Parcel will continue to provide natural resources based research opportunities (maximum 10 points)

Total Score: _____ (maximum score 60 points)

H. Provides Priority Public Benefits for the Forest Legacy Area Where it is Located

Yes No

- ☐ ☐ 1. Retains large contiguous blocks of forest (maximum 10 points)
- ☐ ☐ 2. Protects drinking water supplies (maximum 10 points)
- ☐ ☐ 3. Provides corridors for wildlife migration (maximum 10 points)
- ☐ ☐ 4. Protects mussel and/or anadromous fish habitats (maximum 10 points)
- ☐ ☐ 5. Provides habitat or buffers protected species habitat (maximum 10 points)
- ☐ ☐ 6. Provides key scenic vistas (maximum 10 points)

Total Score: _____ (maximum score 60 points)

Additional evaluators comments for Section IX:

Parcel's Total Score: _____ (maximum score 350 points)

Note: The final score may not be the sole determining factor.

Evaluator's Name: _____ **Date:** _____

FOR OFFICE USE ONLY Application Number: MS-_____ Date: _____



APPENDIX VIII: IMPERILED, VULNERABLE, THREATENED AND ENDANGERED SPECIES BY COUNTY

Legend for Table 9.

Note: Counties or portions of counties highlighted in gray fall within a Mississippi Forest Legacy Area.

S1 Critically imperiled in Mississippi because of extreme rarity or because of some factor(s) making it vulnerable to extirpation as defined by the Mississippi Natural Heritage Program (NHP).

S2 Imperiled in Mississippi because of rarity or because of some factor (s) making it vulnerable to extirpation as defined by the NHP.

T THREATENED. A species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

E ENDANGERED. A species which is in danger of extinction throughout all or a significant portion of its range.

Source: Mississippi Natural Heritage Program.

Special thanks to Matt Hicks.



APPENDIX VIII: IMPERILED, VULNERABLE, THREATENED AND ENDANGERED SPECIES BY COUNTY

Table 9: S1, S2 and threatened and endangered species by Mississippi county

County	# S1 species	# S2 species	# S1/S2 species	# T E species	# S1 S2 and TE species
ADAMS	5	5	10	6	13
ALCORN	5	2	7	6	8
AMITE	6	7	13	2	13
ATTALA	3	5	8	1	8
BENTON	3	4	7	1	7
BOLIVAR	1	4	5	6	8
CALHOUN	2	5	7	0	7
CARROLL	2	6	8	1	8
CHICKASAW	11	25	36	3	39
CHOCTAW	3	6	9	1	9
CLAIBORNE	7	5	12	8	15
CLARKE	4	9	13	6	13
CLAY	21	27	48	12	51
COAHOMA	3	0	3	4	5
COPIAH	6	8	14	6	14
COVINGTON	2	5	7	3	7
DESOTO	5	5	10	1	11
FORREST	21	23	44	11	46
FRANKLIN	3	5	8	2	8
GEORGE	16	34	50	9	51
GREENE	9	20	29	8	29
GRENADA	11	22	33	2	34
HANCOCK	18	33	51	11	54
HARRISON	23	46	69	23	80
HINDS	12	11	23	9	26
HOLMES	1	7	8	6	9



APPENDIX VIII: IMPERILED, VULNERABLE, THREATENED AND ENDANGERED SPECIES BY COUNTY

County	# S1 species	# S2 species	# S1/S2 species	# T E species	# S1 S2 and TE species
HUMPHREYS	2	1	3	2	3
ISSAQUENA	5	2	7	5	7
ITAWAMBA	11	18	29	7	30
JACKSON	56	61	117	29	131
JASPER	5	14	19	4	19
JEFFERSON	3	4	7	2	7
JEFFERSON DAVIS	2	2	4	2	4
JONES	8	8	16	8	16
KEMPER	10	7	17	3	17
LAFAYETTE	6	14	20	3	21
LAMAR	10	15	25	7	26
LAUDERDALE	6	11	17	5	18
LAWRENCE	3	2	5	4	5
LEAKE	2	1	3	3	3
LEE	7	20	27	1	27
LEFLORE	4	0	4	2	5
LINCOLN	2	1	3	1	3
LOWNDES	23	33	56	18	60
MADISON	3	4	7	7	10
MARION	7	9	16	9	17
MARSHALL	4	7	11	3	12
MONROE	22	33	55	12	57
MONTGOMERY	2	3	5	1	5
NESHOBA	3	3	6	2	6
NEWTON	7	7	14	2	15
NOXUBEE	14	25	39	3	39
OKTIBBEHA	20	32	52	5	54
PANOLA	1	2	3	1	3



APPENDIX VIII: IMPERILED, VULNERABLE, THREATENED AND ENDANGERED SPECIES BY COUNTY

County	# S1 species	# S2 species	# S1/S2 species	# T E species	# S1 S2 and TE species
PEARL RIVER	17	26	43	11	45
PERRY	25	30	55	11	56
PIKE	2	4	6	3	6
PONTOTOC	1	14	15	0	15
PRENTISS	2	6	8	0	8
QUITMAN	3	2	5	1	5
RANKIN	3	9	12	4	12
SCOTT	5	10	15	2	15
SHARKEY	5	6	11	8	13
SIMPSON	6	10	16	7	17
SMITH	3	10	13	2	13
STONE	16	31	47	7	48
SUNFLOWER	8	5	13	8	13
TALLAHATCHIE	1	7	8	2	8
TATE	2	0	2	2	2
TIPPAH	6	8	14	1	14
TISHOMINGO	72	49	121	24	126
TUNICA	2	2	4	3	5
UNION	3	9	12	1	12
WALTHALL	1	2	3	3	3
WARREN	7	9	16	10	20
WASHINGTON	6	6	12	4	14
WAYNE	11	18	29	7	29
WEBSTER	5	3	8	1	8
WILKINSON	5	8	13	5	13
WINSTON	5	10	15	1	15
YALOBUSHA	1	4	5	2	5
YAZOO	3	3	6	4	6



